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A SURVEY AND ASSESSMENT OF THE CULTURAL RESOURCES AT KAW LAKE, --ETC(U)

1982 A H ROHN, B M LARSON, M S DAVIS

DACW56-79-C-0021

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A SURVEY AND ASSESSMENT
OF
THE CULTURAL RESOURCES
AT
KAW LAKE, NORTHERN SECTION (KANSAS)



HISTORICAL SECTION
by
William E. Unrau

by
Arthur H. Rohn
Beverly M. Larson
and
Mark S. Davis

FINAL REPORT
Prepared for:
U. S. Army Corps of Engineers,
Tulsa District
Contract #DACW56-79-C-0021

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Archaeology Laboratory
Wichita State University
1982

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FINAL REPORT
PREPARED FOR:
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DEPARTMENT OF THE ARMY
CONTRACT #DACW56-79-C-0021

ARCHAEOLOGY LABORATORY
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ABSTRACT

The U. S. Army Corps of Engineers required a complete inventory and assessment of cultural resources on lands administered by the Tulsa District office around the northern end of Kaw Lake in southern Cowley County, Kansas. Intensive field survey recorded 53 archaeological sites on federal property and 20 additional ones on lands immediately adjacent. Three major geographic concentrations of sites may reflect sizeable prehistoric settlements (communities) of at least three distinct cultural affiliations. A large settlement of protohistoric Great Bend peoples clustered along the lower Walnut River near Arkansas City with minor outlying sites to the east. Late Woodland settlements seem to have existed on the south bluffs of the Arkansas River and in the lower Grouse Creek valley. A very large Middle Woodland settlement seems to have preceded the later one in the lower Grouse Creek valley. Two sites along Grouse Creek contain undisturbed stratified materials belonging to several Woodland components. Seven U.S.A.C.E. owned sites appear to meet eligibility criteria for inclusion on the National Register of Historic Places while nine others should qualify for the Register of Historic Kansas Places. No historic buildings or sites were recorded.

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I. INTRODUCTION

As a part of its management needs to comply with Executive Order 11593 for the lands surrounding Kaw Lake, the U.S. Army Corps of Engineers, Tulsa District, required a complete inventory of all cultural resources within the boundaries of land under its jurisdiction at Kaw Lake. For its northern section in southern Cowley County, Kansas, the U.S.A.C.E. contracted with Wichita State University to conduct the inventory in order to provide information for development of a cultural resources management plan for this property. Contract No. DACW56-79-C-0021 was negotiated to investigate the approximately 3700 acres lying along the Arkansas River between Arkansas City and the Kansas-Oklahoma border, and within the lower valley of Grouse Creek that flows into the Arkansas River from the northeast. Cultural resources are defined as any evidence, structure, or remains of historic or prehistoric nature.

The agreement with the U.S. Army Corps of Engineers, Tulsa District, specified a literature and record search, 100% on-foot archaeological survey of federal lands, minimal test excavations, and appropriate evaluation of significance for all sites recorded. The full text of the contract's scope of work appears in Appendix A.

Other Investigations in Vicinity

The earliest archaeological work in the immediate Kaw Lake area was done by local amateurs in the middle 1890's at the Country Club Site (14C03), located on a bluff east of the Walnut River just north of its confluence with the Arkansas River (Wedel 1959: 355-357). In 1940 Wedel worked at this site and at two others nearby: the Larcom-Haggard Site (14C01) and the Elliott Site (14C02). He placed these three sites in the Lower Walnut Focus of the Great Bend Aspect (1959).

Within the reservoir area itself, the first work done was by Thoburn in 1926 at the Bryson Site (34Ka5), where he found French and Indian artifacts dating between A.D. 1700 and 1750 (Young 1978: 6).

After Kaw Lake was proposed, the National Park Service funded a survey of the reservoir area by the Kay County Chapter of the Oklahoma Anthropological Society. The survey took place in 1963 and 1964, and found 101 archaeological sites, ranging in time from the Archaic to the 18th century. Sixteen (16) of these sites were recommended for excavation (Wyckoff 1965, cited in Young 1978).

In 1967, Bastian excavated two sites that lay on the dam axis: Freeman (34Os59) and Hudsonpillar (34Ka73). The latter had indications of possible Archaic, Middle Woodland, and Late Woodland components (Bastian 1969: 57). The Freeman Site contained three components: Archaic, Late Woodland, and Late Village (ibid.: 118).

In 1971 Bell drew up a five-stage fieldwork plan for the Lake area. The first phase had been already completed by Bastian.

Phase II fieldwork focused in the southern section of the reservoir, and was done by Rohrbaugh in 1972. Eleven (11) sites were surface collected, 9 tested, and 2 (Gary Daniels and Glenn Peel) were excavated. The Gary Daniels Site (34Ka77) had at least two components: Middle Woodland and Early Village. The Glenn Peel Site (34Ka100) had a Late Woodland component (Rohrbaugh 1973).

Phase III fieldwork took place in 1973 and dealt with the central section of Kaw Lake. Twenty-three (23) sites were surface collected, 5 had minor testing, 2 were more extensively tested (the C. H. Stockton Site and the Jim Butterfield Site), and three were excavated (the Von Elm, Vickery, and D. E. Spencer Sites).

The D. E. Spencer Site (34Ka62) was characterized by Rohrbaugh as a probable Late Woodland occupation (1974: 29). The L. W. Vickery Site (34Ka41), he saw as probably belonging to the "later part of the Plains Woodland complex." A charcoal sample from feature 1 of this site yielded a C-14 date corrected to between A.D. 370 and A.D. 560 (ibid.: 49-50).

The Von Elm Site (34Ka10) produced four C-14 dates, whose spans run from A.D. 120 to A.D. 650. Deleting the oldest date (A.D. 590), which came from the same pit as two earlier and closely-spaced dates, the range is narrowed to A.D. 120 - A.D. 530 (Hartley 1974: 127). Hartley sees similarities between the materials from Area C of Von Elm and those of the Vickery Site (e.g. many contracting stemmed large points and small corner-notched points), and considers them as belonging to "roughly the same time span within the Plains Woodland phase" (ibid.: 128).

Of the two sites extensively tested, the Butterfield Site (34Ka119) appeared to belong to the Plains Woodland complex. Although it lacked dart points, Neal felt that it probably belonged to the same time span as the Vickery and Von Elm Sites (Rohrbaugh 1974: 107). The C. H. Stockton Site (34Ka99), on the other hand, had a Plains Village occupation and possibly belonged to the Great Bend Aspect (ibid.: 91). Of the five other tested sites, two produced no clearly diagnostic materials, two were probably Archaic, and one was relatively late (ibid.: 131-149).

The results of this third phase of fieldwork led both Hartley and Rohrbaugh to question Bastian's division of Woodland culture in this area into Middle and Late (Rohrbaugh 1974: 163; Hartley 1974: 129). The dates from Vickery and Von Elm point to an early use of the bow and arrow on the Southern Plains, and show that these sites may date earlier than the Middle Woodland occupations at Hudsonpillar and Butterfield (Hartley 1974: 130).

Phase IV of fieldwork concentrated on three sites in the northern section of the proposed lake area: Bryson-Paddock, Herbert Shelter, and Greenhagen, and took place in 1974 under the direction of Hartley.

The Bryson-Paddock Site (34Ka5) was a protohistoric Wichita site. The Greenhagen Site (34Ka92) appeared to have had at least two components: one probably Early Woodland, and the other Plains Village (Hartley 1975: 90). Of the three once-occupied rockshelters at the Herbert Shelters (34Ka91), only one (No. III) had clearly diagnostic materials. These pointed to an Early Plains Village occupation (*ibid.*: 117).

Phase V fieldwork consisted of further exploration at Bryson-Paddock by Hartley and Miller, and the excavations by Young of five other northern section sites: Love, Hammons, Bryson Homestead, Scott, and Smith. In addition, Young revisited and surface collected 16 sites, and tested 6 of these. All of this took place in the summer of 1975.

The Bryson-Paddock Site was characterized as a protohistoric Wichita village actively involved in trade with the French, and dating from around A.D. 1660 and A.D. 1760. The location and prominence of this site and Deer Creek (13Ka3) are partly attributed by Hartley and Miller to their control of local chert quarries. Their abandonment is partly ascribed to the elimination of chert as an important resource by the greater availability of metal (Hartley and Miller 1977: 258).

As for the sites dug by Young (1978), the Love Site (34Ka2) appears to have a Plains Woodland component. The Hammons Site (34Ka20) has two components: Plains Woodland (with C-14 dates ranging from A.D. 80 and 140), and Plains Village. The first component contains Middle Woodland traits (zone dentate-stamped pottery, obsidian, etc.), which Young believes were imported (*ibid.*: 126).

The remains of a charred human skeleton were discovered in the rock and soil mound at Bryson Homestead (34Ka21). The second phase of the mound's construction may have been the work of Deer Creek or Bryson-Paddock Wichita (*ibid.*: 295).

The Scott Site (34Ka52) contained a Plains Woodland, a Plains Village, and a Historic component. The Smith Site (34Ka88) yielded no diagnostic material. The remaining sites (those surface collected or tested lightly) were all either Plains Woodland or Plains Village.

More recently, additional work has taken place just north of the reservoir area itself, in the form of a survey of cultural resources in flood control improvement areas near Arkansas City, Kansas. TECHRAD personnel located five sites. Three of these appeared to be Plains Village; the rest were not identifiable. In addition, the Larcom-Haggard site was resurveyed.

Research Design

The scope of work specifically calls for 100% inventory of all archaeological and historic resources on lands specifically owned by the United States government and managed through the U. S. Army Corps of Engineers around Kaw Lake in Kansas. Within these parameters, several problems can be examined.

The best known archaeological complexes in the vicinity have been the Lower Walnut Focus occupation of the Great Bend Aspect near Arkansas City (Wedel 1959) and the ethnohistoric Wichita Indian villages centering on Deer Creek near Newkirk, Oklahoma. Wedel described a cluster of Great Bend sites on both sides of the Walnut River just above (north) its confluence with the Arkansas River. As yet, however, no one has delineated the extent of this Great Bend occupation, and the Kaw Lake survey offers an opportunity to examine its possible southern boundary. In other words, does the distribution of the Lower Walnut Great Bend occupation (settlement) extend southward and southeastward along the Arkansas River?

Archaeological mitigation within Kaw Lake's project area in Oklahoma (e.g. Hartley 1975; Young 1978) and recent work around Wichita and El Dorado in Kansas (e.g. Grosser 1973) have both revealed pronounced occupations by Plains Woodland peoples. However, these Plains Woodland remains have not yet revealed any clear pattern of either cultural or chronological relationships among them. Presumably Woodland occupations should also be found in the Kansas Sector of Kaw Lake which could in fact produce helpful data for synthesizing the presently very confusing materials reported from both north and south of the project area.

Throughout most of Kansas, the Arkansas River valley contains almost no traces of archaeological sites. Most site concentrations occur at the mouths of tributary streams or along the lower reaches of these streams adjacent to the Arkansas River floodplain, such as

on the lower Walnut River. Consequently, we might expect to locate a major cluster of archaeological sites in the lower valley of Grouse Creek, perhaps specifically adapted to that environmental setting. Conversely, we might expect to locate few, if any, sites along the Arkansas River floodplain and bluffs.

II. PREHISTORIC CULTURAL OVERVIEW

Almost all previously reported archaeological work within a 60-mile radius of Kaw Lake has resulted from reservoir construction along streams draining the Flint/Osage Hills (Fig. 1: Table 1). Consequently, most of the reported information derives from samples selected arbitrarily for non-cultural reasons. Settlement pattern analysis has been severely limited because survey area boundaries have been determined for the most part by flood pool levels, and thus represent only one exploitive stream valley bottomland zone. Only occasionally are bluff tops included in the survey. Any attempt to compare these reports must take into consideration the ecological zones included within the survey area, field conditions during the survey, methods of data collection, and geological factors such as silting over or washing out of top soil that might influence the site distributions observed by the field survey crews.

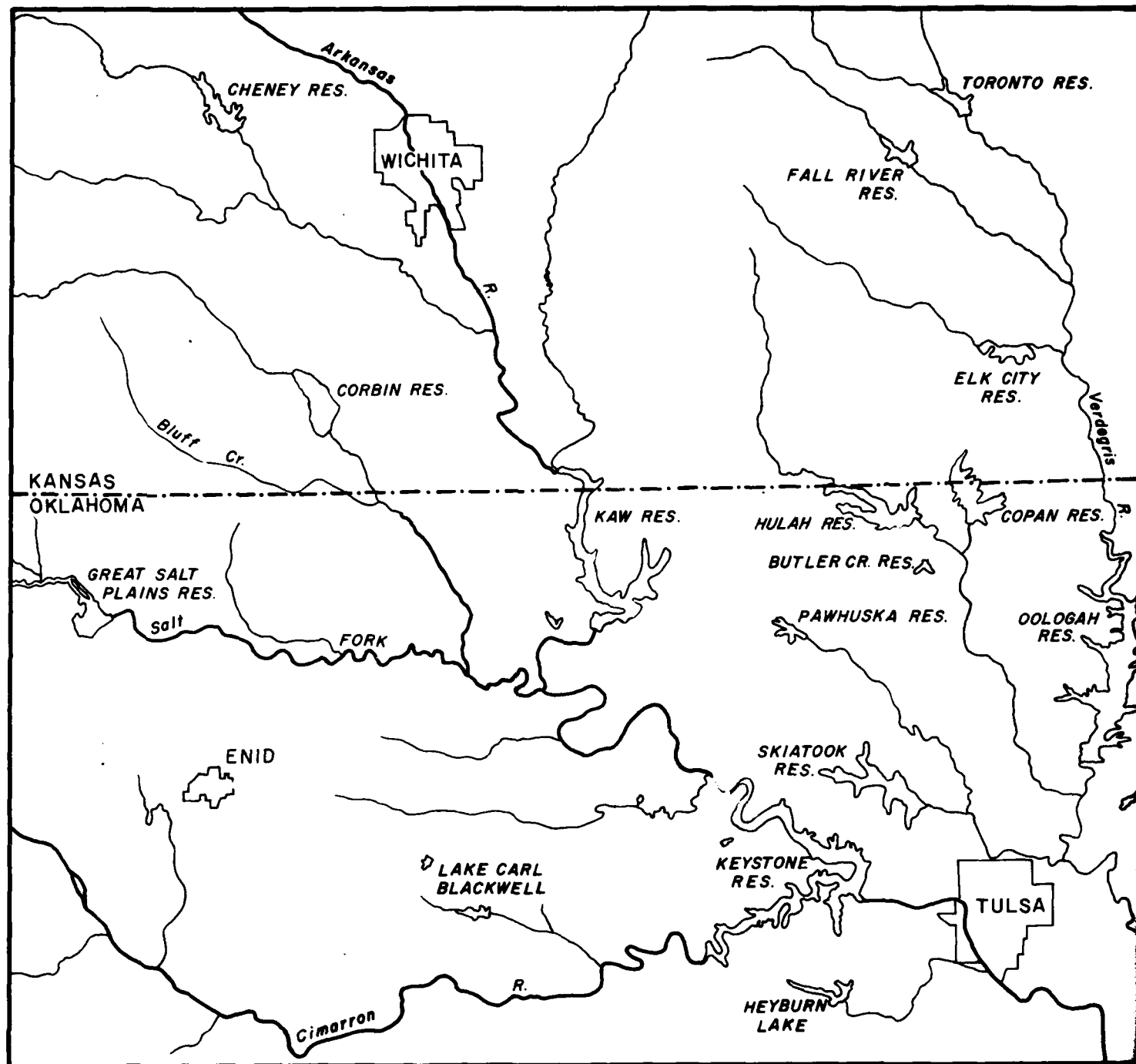
Discrepancies in nomenclature between the various researchers for projectile point types, cultural complexes, and lithic resources also exist. Many of these are a result of modern state boundaries and have no environmental relation to the cultural manifestations being studied. This is especially true of the Kaw Lake district that straddles the Kansas and Oklahoma border. This report will note the differences apparent in typology and methodology, and provide descriptive documentation that can then be used for comparative purposes with previously published works.

Cultural Setting

Few Paleo-Indian remains have been recorded in southeastern Kansas and northeastern Oklahoma. This possibly reflects the magnitude of alluvial deposition in this area rather than the absence of big-game hunters, since Paleo-Indian complexes such as the Dalton have been found to the east in Missouri (Chapman 1975) and Plainview, Folsom, and Clovis points are common in southwest Kansas (Brown 1976; and Glover 1978). Scattered finds of Paleo-Indian points found by local collectors have been noted in the John Redmond and Toronto Lakes (Wood 1977: 31) and Corbin Lake, Kansas (Rohn, Brogan, and Johns 1976), and in northeast Oklahoma (Keyser and Farley 1979: 5).

An Archaic occupation of eastern Kansas and Oklahoma has been documented but remains are not numerous. The Grove Focus (Bell and Baerreis 1951: 10-14) has been defined for the Ozark Plateau of northeast Oklahoma, and is divided into three stages based on a reduction in tool size. Large contracting and expanding stem

FIG. 1



LOCATIONS OF ARCHAEOLOGICAL INVESTIGATIONS IN SOUTHERN KANSAS & NORTHERN OKL

TABLE 1. SUMMARY OF ARCHAEOLOGICAL WORK IN KAW LAKE VICINITY

Project	Location	Methods	No. of Sites	References
Kaw Lake	(lower Walnut R.)	limited surface collection and testing	3	Wedel (1959)
	flood pool area	survey and surface collection	101	Wyckoff (1965)
	dam axis	excavation	2	Bastian (1969)
	lower reservoir	surface collection, testing, excavation	11, 9, 2*	Rohrbaugh (1973)
	middle section	surface collection, testing, excavation	23, 5, 5*	Hartley (1974)
	upper section	excavation	3	Rohrbaugh (1974)
Ark City Local Protection Project (flood control improve.)	upper section	excavation	1	Hartley (1975)
	upper section (mainly)	surface collection, testing, excavation	10, 6, 5*	Hartley & Miller (1977)
	Walnut River	survey (no s.c.)	6	Thoms & Hill (1979)
Bluff Creek	Anthony Site	excavation, surface collection	1	Munsell (1961)
	Caldwell	excavation	2	Witty (1969)
	Bluff Creek	survey, surface collection	40 40	Gould (1975) Gould (1975)
Corbin Lake	Chikaskia River	survey, surface collection	26	Rohn, Brogan, and Johns (1976)
El Dorado	Walnut River	survey	27	Eoff & Johnson (1968a)
	Walnut River	excavation	1	Grosser (1973)
	Walnut River	excavation	2	Fulmer (1976)
	Walnut River	testing	1	Bastian (1978)
	Walnut River	testing, synthesis	5	Leaf (1979)

* (11) surface collection only, (9) tested only, (2) excavated

TABLE 1. (continued-2) SUMMARY OF ARCHAEOLOGICAL WORK IN KAW LAKE VICINITY

Project	Location	Methods	No. of Sites	References
Big Hill Lake	Big Hill Creek	survey	9	Marshall (1966)
	Big Hill Creek	testing	18	Rowlison (1977)
	Big Hill Creek	excavation	4	Rowlison (1980)
	Big Hill Creek	survey	20	Brogan (1981)
Cedar Point Lake	Cedar Creek	testing	14	Wood (1977)
Upper Verdigris	Upper Verdigris watershed	excavation	4	Calabrese (1967)
	Upper Verdigris watershed	survey	11	Witty (1965)
Toronto Lake	Verdigris River	survey, testing	42	Howard (1964)
		survey	19	Rohn & Cacloppo (1981)
Elk City Lake	Elk River	excavation	9	Marshall (1972)
		survey	103	Brogan (1980)
Fall River Lake	Fall River	survey	86	Eoff & Johnson (1968b) Elcock (1979b)
Candy Lake	Candy Creek	survey, excavation	6	Leehan (1977)
Birch Lake	Birch Creek	survey	4	Barr (1965)
	Birch Creek	survey	15	Perino (1972a)
	Birch Creek	testing	3	Gettys & Layhe (1976)
Skiatook	Osage Hominy Creek	survey	11	Rohrbaugh & Wyckoff (1969)
	Osage Hominy Creek	survey	31	Perino (1972b)
	Osage Hominy Creek	survey, excavation	16	Gettys & Layhe (1976)

TABLE 1. (continued - 3) SUMMARY OF ARCHAEOLOGICAL WORK IN KAW LAKE VICINITY

Project	Location	Methods	No. of Sites	References
Copan Lake	Little Caney River	survey	58	Rohn & Smith (1972)
	Little Caney River	testing, excavation	11	Vaughan (1975)
	Little Caney River	survey, excavation	2,3	Vehik & Palles (1979)
Oologah Lake	Verdigris River	survey	11	Prewitt (1968)
	Verdigris River	excavation	1	Baldwin (1969)

projectile points are characteristic. This manifestation is dated 7500 B.C. to A.D. 1 (Baldwin 1969: 70).

Archaic components have also been found in Oklahoma at the Hogshooter Site at Copan (Howard 1970), the Freeman and Vickery Sites in Kaw Lake, and the Lawrence Site at Oologah (Henry 1977: 4). Calf Creek points, usually placed in a Middle Archaic range, have been reported in the Copan Lake district (Keyser and Farley 1979: 6), in northern Kaw Lake, and from the environs of Wichita, Kansas.

The Munkers Creek Phase has been defined for the eastern edge of the Flint Hills in the Blue, Upper Neosho, and Cottonwood River drainages. It is characterized by large lanceolate projectile points. Dates for the complex at the William Young Site place it at about 5000 B.P. (Wood 1977: 32).

Work at El Dorado Lake has led to the formulation of three stratigraphically separate Archaic phases (Grosser 1973; Leaf 1979). The Chelsea Phase, dated from 5000 to 2000 B.C., contains both notched and lanceolate points. The later El Dorado Phase (2000 to 1400 B.C.) was defined at the Snyder Site from a more varied stone tool assemblage including stemmed points, drills, scrapers, axes, and grinding stones (Grosser 1973). A similar assemblage known as the Eagle Complex has been identified in the John Redmond Reservoir at the Williamson Site. Points are similar to the Table Rock and Lamoka types, and dates for the site indicate an occupation around 1650-1530 B.C. (Wood 1977: 32). Rohn, Stein, and Glover (1977) identified a similar complex (labelled Colvin Phase) at two sites along Wolf and Long Creeks, a few miles to the east.

The Walnut Phase begins sometime about 1200 B.C. and does not appear to have antecedents in the El Dorado Phase (Grosser 1973). Points are small and corner notched, and plano-convex end scrapers--absent in the El Dorado Phase--now occur.

The subsistence pattern inferred from these Archaic manifestations generally suggests small hunting and gathering groups exploiting a wide range of resources on a seasonal basis. The full range of the seasonal round, however, cannot be fully understood in those areas where survey is limited to the bottomlands. The time depth involved also suggests many sites remain deeply buried and, therefore, unrecorded. The assemblage is characterized by large to medium-size stemmed projectile points and the absence of pottery.

Plains Woodland

The Woodland stage is usually subdivided into early, middle, and late substages. On the basis of early work in Kaw Lake that failed to reveal any artifacts indicative of an Early Woodland occupation, Bastian (1969) hypothesized a direct transition from Late Archaic to Middle Woodland. Materials considered diagnostic of the Middle Woodland include large wide expanding stem projectile points, large domed end scrapers, discoidal cores, hafted perforators, zone dentate-stamped pottery, and obsidian. Late Woodland assemblages were identified by the presence of Scallorn points and cord-marked pottery, plus the absence of large stemmed points. More recent excavations in northeastern Oklahoma have indicated that separate components cannot be isolated on the basis of these traits. Contracting stem projectile points have been found with Scallorn types at the Vickery Site dated at A.D. 430 and the Von Elm Site with dates of A.D. 200, 590, 210, and 480 (Hartley 1975: 127). Pottery at the Von Elm Site is smooth surfaced with sand temper, while it was untempered at the Vickery Site. However, at other Plains Woodland sites in the same area, other tempering materials and surface treatments occur together. At the Hammons Site, the majority of pottery is sand and sand/clay tempered with smoothed and cord-marked surfaces, but bone and limestone were also used as temper and zone dentate stamping was also found (Young 1978: 104). Radiocarbon dates for this site are given as A.D. 350 \pm 80, A.D. 80 \pm 70, A.D. 140 \pm 190 (Young 1978: 86).

Other dated Plains Woodland sites contemporaneous to the Von Elm and Vickery Sites, such as Big Hank Shelter (Henry 1977: 7), have not produced pottery.

The Cooper Complex was defined in northeastern Oklahoma on the basis of surface finds only of thick grit-tempered pottery, large corner-notched points, end scrapers, knives, and grinding stones. It has been assumed to show influence by other Middle Woodland groups to the east. To the north, in the Elk City, Big Hill, and Toronto Lake districts of southeast Kansas, the Cuesta Phase assemblage exhibits a similar influence, as do the Kansas City Hopewell sites still farther to the north. Cuesta Phase sites produce zone dentate-stamped, cord-marked, and smooth-surfaced pottery with predominantly clay temper and concial bases (Marshall 1972). Some bone and limestone-tempered sherds are also found (Witty 1979). Projectile points found on Cuesta Phase sites include Gary, Snyder, and Scallorn types. Post hole patterns indicate houses were large oval structures with interior hearths found on low stream terraces (Rowlison 1977: 140). Although house types for Cooper sites have not been determined, Cooper and Cuesta assemblages appear to be essentially the same except for minor variations in choice of temper and the ratio of Gary to Snyder points.

Snyder points occur more commonly on Cooper sites, and Gary points on Cuesta sites (Witty 1979). Radiocarbon dates for Site 14MY305 in the Elk City Reservoir place the Cuesta occupation there at A.D. 780 \pm 80 and A.D. 970 \pm 80 (Marshall 1972: 230).

Another Woodland phase, the Greenwood, has been defined in the upper Verdigris, Neosho, and Marais des Cygne River drainages in east central Kansas. Pottery is principally cord marked with crushed, burned limestone temper, but inclusions of slag and shale are also common (Wood 1977: 34). Large and small corner-notched points are found, and the house form is a loose oval smaller than those at Cuesta Phase sites. Radiocarbon dates for three Greenwood Phase sites are A.D. 380 \pm 230 at the Curry Site, A.D. 550 \pm 250 at the Gilligan Site, and A.D. 1045 \pm 115 at the Two Dog Site (Wood 1977: 34).

Recent investigations in and around Wichita have yielded sparse Woodland assemblages from several sites. Large oval houses were recognized at the Tomlin and Grove Park Sites; sand-tempered, zone dentate-stamped, and cord-roughened pottery came from Grove Park; the Painted Turtle Site produced a conoidal based cord-marked jar with incised line decoration forming a wide net pattern. All three sites produced mostly small corner-notched points, although larger stemmed and corner-notched varieties also occur. Bison exploitation seems to be represented at several Wichita sites.

The basic interrelationship of these defined Woodland units is unclear, as are the taxonomic units themselves in some instances. The need for investigation and more detailed comparison is apparent, but some broad generalizations can be inferred from what is now known. There is some evidence that Late Archaic groups were becoming more sedentary, or at least their seasonal round was becoming more fixed (Henry 1977). Late Archaic Nebo Hill houses have been recognized at Site 14MM27 in the Hillsdale Lake district of eastern Kansas.

House structures and storage pits on Woodland sites indicate a still greater degree of sedentariness. While this sometimes is taken to imply indirectly a reliance on horticulture, it just as well could be the result of a primary forest efficiency in hunting and gathering. Coincident with this change is the introduction of pottery which also is considered a sign of a more sedentary lifeway. While the earliest pottery is found at Nebo Hill sites near Kansas City and is fiber tempered (Reid 1979), most early pottery in eastern Kansas and Oklahoma shows contact with Middle Woodland groups farther to the east. While the early plain-surfaced pottery at the Von Elm and Vickery Sites (Kaw) have been contrasted with the dentate-stamped wares that indicate contact to the east (Bastian 1969: 121), dentate-stamped sherds have been found at sites with both plain and cord-marked pottery. This may be a sign of trade between distinct groups, or it could represent the copying of various pottery styles observed by one homogeneous group. Obsidian and non-local chert also support the idea of a large trade network responsible for the transmission of ideas

over a wide area.

A general trend may be seen within Woodland assemblages towards smaller Scallorn type projectile points. If smaller points are taken to represent the introduction of a new technology--the bow and arrow--rather than a different social group, one might expect earlier assemblages would have both large dart points and smaller arrow points (Fig. 2). This may also represent two distinct hunting strategies allowing a fuller range of exploitation. That one replaced the other in Late Woodland would indicate the bow and arrow proved more adaptive under the given ecological conditions.

Plains Village

The early part of this stage in northern Kansas and Nebraska is represented by the Central Plains Tradition, which includes such archaeological units as the Smoky Hill, Upper Republican, and Nebraska Aspects. Distinctive features of these three complexes are their semi-subterranean earthlodges. During the same time span in Oklahoma, Washita River and Custer Foci are characterized by rectangular surface house forms. Rectangular houses and a functionally similar material culture have also been recovered from the Uncas Site in Kaw Lake.

Although the precise taxonomic placement of the Pomona Focus is unclear, it has at various times been referred to as Central Plains, as Late Woodland, or as an indigenous Late Woodland population influenced by the more horticultural Central Plains Tradition farmers. Pomona pottery is, for the most part, untempered but shows inclusions of shale and ferrous manganese concretions that presumably are natural in the clay. It is mostly cord marked, but some smooth-surfaced examples occur. Vessel shapes differ from the typical Woodland conoidal base form, by having a small globular body shape with a straight or collared neck and rim. Projectile points also are different--small and triangular points with single or double side notches and basal notches (Washita, Harrel, Huffaker). House forms are poorly defined, but generally assumed to be small oval loose thatch and daub structures without interior hearths. Sites have been located in the area east of the Flint Hills as far north as the Kansas River and south to the Big Hill and Elk City Lakes (Rowlison 1-77: 142). Dates range from A.D. 1020+150 to 1560+120 (Wood 1977: 36).

Two significant archaeological investigations have been made along Bluff Creek in Harper and Sumner Counties in Kansas, about 40-50 miles northwest of Kaw Lake. In 1959, Marvin Munsell dug at the Dow Mandeville or Anthony Site on a small tributary to Bluff Creek (Munsell 1961). He first identified the culture found there with the Central Plains Phase, and saw similarities between it and

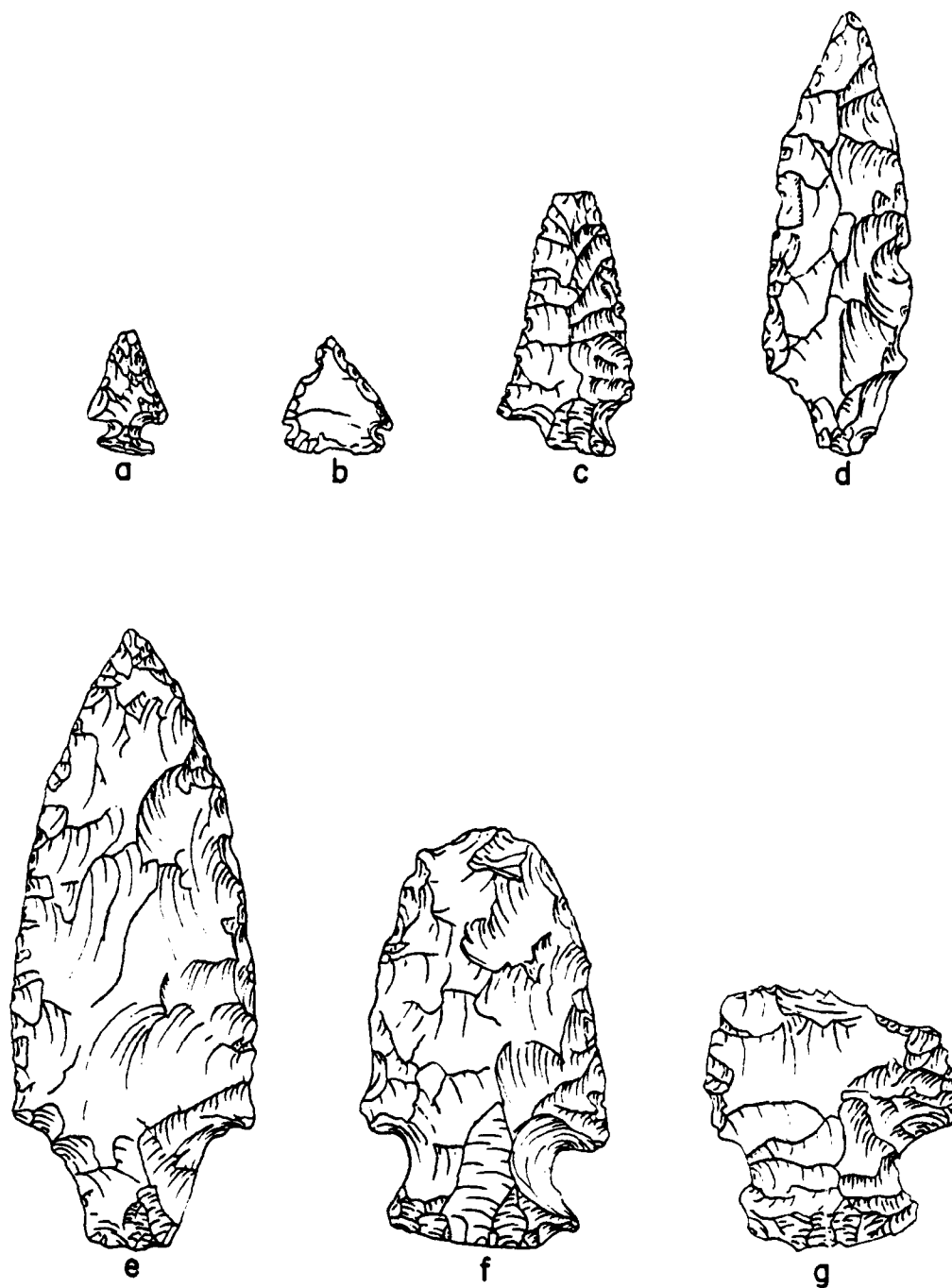


FIGURE 2. WOODLAND PROJECTILE POINT STYLES
FROM KAW LAKE

and the Panhandle, Great Bend, and Fulton Aspects (1960). Later, he saw it as more closely affiliated with the Smoky Hill Aspect, and proposed a range of A.D. 1100 to A.D. 1600 for the occupation (1961).

In 1966, the Kansas State Historical Society salvaged part of the Anthony Site (14HP5) and found several storage pits. In 1969, the Kansas State Historical Society, under Tom Witty, dug at Sites 14SR303 and 14SR305. Three earthlodges were excavated at 14SR303 (the Buresh Site) and another at 14SR305 (the Nulik Site) (Witty 1969: 102). The two radiocarbon dates from Buresh were A.D. 1080±90 and A.D. 900±110, while the one date from the Nulik Site was fairly close: A.D. 1190±110 (Gould 1975: 86). Witty considered these sites to be affiliated with the Washita Focus (op. cit.: 2)

Ronald Gould did an extensive survey of the Bluff Creek Drainage in 1975, and included Witty's three sites in his analysis. He surface collected some 40 sites, one of which was Archaic and the rest Middle Ceramic. Gould saw similarities between this complex and both the Smoky Hill and Washita Aspects. Ceramics from Bluff Creek most resembled Stafford Cord Marked and Lindsay Cord Marked (Gould 1975: 117-118). Nevertheless, Gould does not venture to positively affiliate this complex with any particular aspect of Central Plains culture.

The Great Bend Aspect

The Great Bend Aspect is a protohistoric or late ceramic Kansas culture found and recorded in an area roughly defined by a triangle with its vertices at Larned (Pawnee County) in the west, Strong City (Chase County) in the east, and Arkansas City (Cowley County) in the south. Although the western and eastern borders are generally accepted, the limited amount of work carried out in the southern portion of the range leaves some doubt about the precise extent of the southern boundary.

Physiographically, according to Schoewe (1949), the eastern portion of the range lies in the Osage Plains and more specifically, in the Flint Hills Upland. The western and central portions lie within the Arkansas River Lowlands, except for a group of Rice County sites that are located along the Little Arkansas River and its tributaries. These sites are physiographically a part of the Dissected High Plains.

Temporally, the Great Bend Aspect falls within the protohistoric stage, with the time range estimated to extend from ca. A.D. 1450 to 1700. These dates are based upon historical accounts, the presence of European artifacts at some of the northern sites, and the presence of Puebloan pottery sherds, dated by relative chronology. As yet, no internal chronology has been established for the Great Bend Aspect.

Great Bend Aspect peoples were most probably the Quivirans encountered by Coronado in 1541 and Oñate in 1601. Studies detailing the routes taken by these explorers, their encounters, and the arguments that these were, in fact, people of the Great Bend Aspect may be found in Barry (1972), Brower (1898), Hammond and Rey (1940), Jones (1928), Schroeder (1962), and Wedel (1941, 1942, 1959, 1968, 1975).

Wedel describes two foci for the Great Bend Aspect. The Little River Focus is represented by several sites in Rice and McPherson Counties to the north. The Lower Walnut Focus sites are located in the southern portion of the range in and around Arkansas City. Although Wedel (1959: 501) originally attributed the Marion sites to the Little River Focus, recent and more extensive work in the area indicated that this designation may have been applied too soon. The Marion sites have produced artifacts typical of both foci (Fig. 3).

Many of the habitation sites in Rice, McPherson, Cowley, and Marion Counties represent a sedentary seasonal type of settlement (Chang 1972: 14-15). They were occupied during that period of the year when the primary subsistence activity involved the cultivation of crops (e.g. corn, beans, and squash) on the bottomlands near the rivers and streams. At other seasons of the year, these villages were apparently abandoned by the able-bodied who then went to hunt bison. During this time, they would set up seasonal camps of a less permanent nature near the hunting area, as at the Larned Site (Monger 1970).

The houses of the Great Bend Aspect were constructed of wooden poles and grass thatch, had a circular form, and varied from ten to eighteen feet in diameter. These conform to what was reported about Quiviran houses from the Coronado and Oñate expeditions. In his description of one Quiviran village, Oñate explained that the houses "were set in groups and that the groups were separated from each other" (Monger 1970: 1). The separation described here may be representative of some aspect of the social organization of these people.

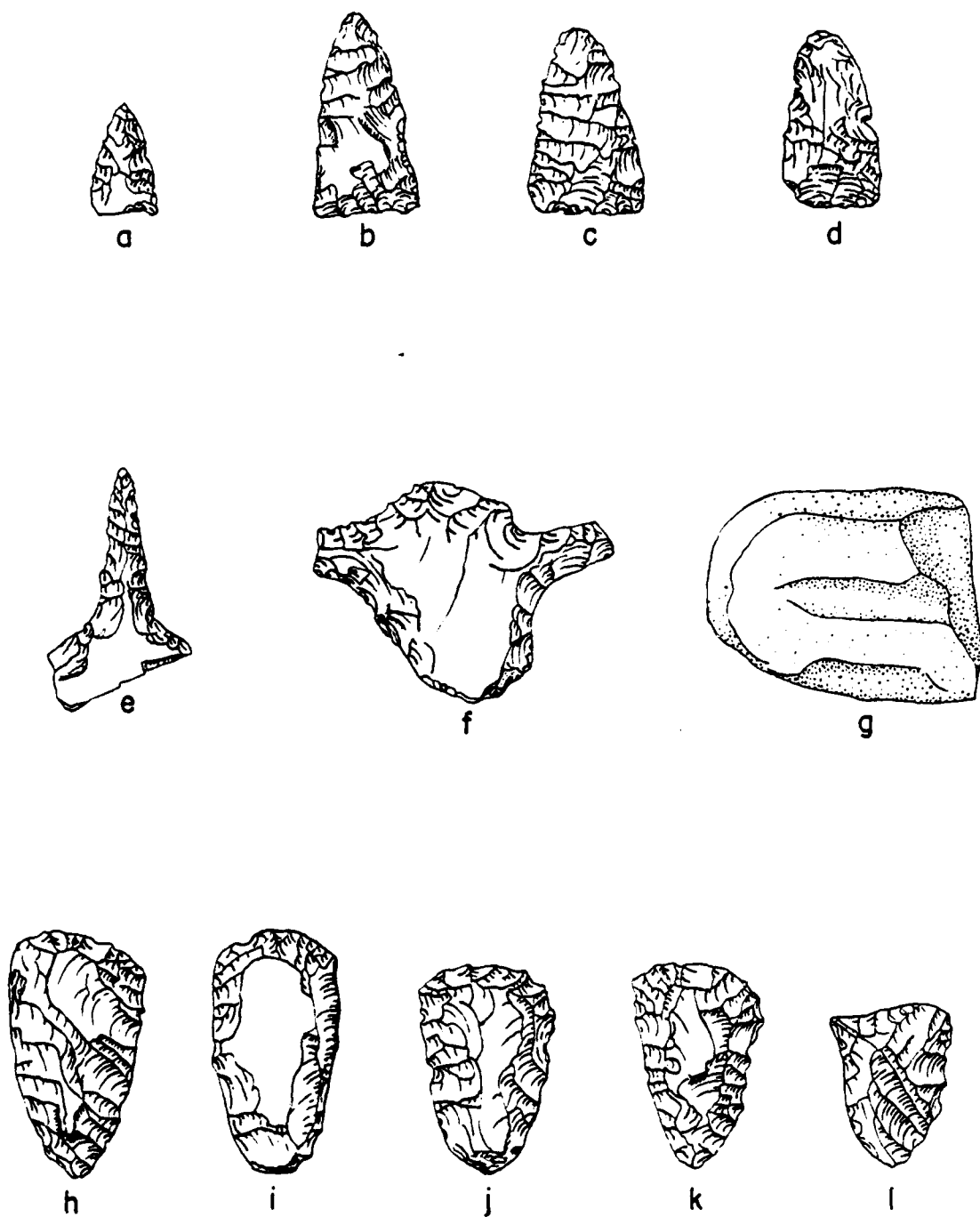


FIGURE 3. GREAT BEND ARTIFACTS FROM SITE 14C0501

III. HISTORICAL REPORT

by

William E. Unrau

From an historical perspective the cultural resources at Kaw Lake in extreme southern Kansas are inextricably related to the Arkansas River as a major artery of exploration and travel, and the circumstances resulting from rapid white settlement of southern Kansas and the federal government's Indian policy during the second half of the nineteenth century. Few locations in the south central plains provide a better focal point for understanding the conflict between the forces of white settlement on the one hand, and the recalcitrance of several Indian nations to relinquish the area on the other. The area is also a focal point for understanding the clash between advocates of a river transportation system as opposed to those who promoted the construction of a railroad empire from Kansas into the Indian Territory.

Following possibly thousands of years of occupation by various Indian farmers and hunters, Spain asserted her sovereignty over the Kaw Lake area in the mid-sixteenth century. This was challenged in 1682 when Rene Robert Cavelier, Sieur de la Salle, claimed the entire Mississippi River drainage basin for France. European diplomacy and power politics accompanying the French and Indian War shifted sovereignty back to Spain in 1762; but the area was ceded back to France in 1800, and three years later the site of future Kaw Lake was sold to the United States as a part of the famous Louisiana Purchase. In the meantime, dual sovereignty was claimed by several Indian Nations--claims that in fact were legally recognized by the United States government. By the treaty of June 2, 1825, and the Congressional Act of July 15, 1870, the Great and Little Osage Nations ceded their claims to the area of present Cowley County, and on March 21, 1866, the Cherokee Nation relinquished its claim to the extreme southern portion of the Kaw Lake area in Kansas. The political power of white squatters, homesteaders, town promoters, ranchers, and railroad speculators brought pressure on these Indian nations to the extent that the struggle was no contest from the start. It should be emphasized that these massive land cessions could not have been engineered without the administration of a federal Indian policy wholly in tune with unilateral Indian land dispossession.

In 1601, just over half a century after Coronado's celebrated entrada into the Great Plains, Juan de Oñate, in company with a large detachment of soldiers and missionaries, invaded the land of the Jumanes [. . . because all the Rayadaos (painted Indians) are called thus . . .] from the Spanish province of New Mexico. Oñate may have

confronted the inhabitants on the lower Walnut at or near the confluence with the Arkansas (well within the confines of present Kaw Lake). Other possible points of contact might have been on Cow Creek, the mouth of the Little Arkansas, or several points in either Harper or Sumner Counties in Kansas. In any case, his invasion was upsetting in the extreme, for shortly thereafter, fights broke out between the "grass house people", as Omate described them, and the Escanjaques (a neighboring Quiviran people).

Subsequent to this invasion there ensued a period of nearly two centuries during which the native inhabitants of the Kaw Lake area were able to pursue their traditional way of life mostly unmolested by European imperialists. However, they did carry on an active trade with the French, especially through the Deer Creek and Bryson-Paddock villages along the Arkansas River near present-day Newkirk, Oklahoma. By the early nineteenth century, however, the quest for mineral wealth had given way to a much more rational objective on the central Great Plains--fur. As well, there was the seductive attraction of locating a convenient commercial highway between the advancing American frontier, with its plethora of cheap consumer goods, and the mineral-rich Spanish towns of New Mexico.

Mexican independence from Spain and the Adams-Onís Intercontinental Treaty of 1821 (defining once and for all the western boundary of the Louisiana Purchase of 1803) demolished prohibitive tariff barriers dating back to the turbulent 1760's, and eager Franco-American merchants from New Orleans and St. Louis moved into the interior with a vengeance. Thus it was that in 1821 the Hugh Glenn-Jacob Fowler party crossed the Walnut River just east of present Arkansas City, Kansas, in pursuit of profit-bearing furs and mineral wealth in Santa Fe that hopefully would make them a fortune. The Kansa (Kaw) and Osage Nations, who by this time were hunting and fishing at the site of future Kaw Lake on a perennial basis, were obliged to re-evaluate this vital aspect of their economic security. Four years later, in 1825, both the Kansa and the Osage signed treaties with the United States that constituted the beginning of the end of their influence in the Kaw Lake area. During the late 1820's, A. P. Chouteau of the famous fur-trading firm in St. Louis reported that from his post on the lower Verdigris near Three Forks, he was sending forty-ton crafts during high water up the Arkansas River as far as the mouth of the Walnut, and as late as 1843 the fur trader Ceran St. Vrain was shipping fur down the Arkansas "to the mouth of the Walnut." One early nineteenth century estimate had it that the annual fur trade on the Arkansas in the vicinity of the Walnut and points south, amounted to \$50,000.

With the creation of Kansas statehood in 1861, the practice of forming counties proceeded at a brisk pace. Cowley County was created by the state legislature on March 3, 1867, and formally surveyed by O. F. Short and P. Angell in January, 1871. By this time

a settlement had been established at Cresswell (future Arkansas City), even though the Osage Indians enjoyed legal title to the land until the Drum Creek treaty of July 15, 1870. Squatters such as H. C. Endicott, George Harmon, Ed Chapin, W. Johnson, Pat Endicott, Pat Somers, E. C. Manning, and Z. K. Rogers were reported to have paid the Osage leader Chetopa \$5.00 per year to live on Osage land. It was probably during this time that the Osage Trail extending westward from the Neosho and Elk River valleys, across Grouse Creek about two miles above Dexter, over the Tisdale townsite, over the Walnut River at the Winfield townsite, and then to the Arkansas River at the mouth of the Ninescah River, was used rather extensively. Then, in the early 1870's, when the Osage had mostly removed to Indian Territory, a variation of the trail developed that followed the east bank of the Arkansas River and crossed Grouse Creek very near its confluence with the Arkansas. Other tribes who used this trail were the Kansa (Kaw), Ponca, Otoe-Missouri, Pawnee, and Cherokee. Hunting and fishing were now being replaced by the increasing dependency on white trade goods available at Arkansas City, Winfield, Oxford, and Wichita. In their trek to white "civilization" many of these Indians engaged the services of the public ferry that was established on the sandy bottoms less than a mile above the Walnut River confluence with the Arkansas.

When Kansas became a state in 1861, a law was passed barring entry of Texas cattle into the state during the warm-weather months of the year. The purpose of this quarantine action was to avoid contact with cattle that could transmit Texas or Spanish tick-fever to the cattle of Kansas. The tick could not survive freezing weather, so the quarantine line did not apply in cold weather. Because of its close proximity to the Chisholm Trail, which was opened up in 1867, the area of Kaw Lake was a logical place for illegal cattle to be driven to the railhead at Abilene. As a consequence, a "quarantine area" was located in a triangular area just above the Grouse Creek confluence with the Arkansas River. Here illegal cattle were collected and forced to be moved further west where the quarantine law did not apply (usually the area west of the Sixth Principal Meridian and south of a line drawn through the center of the state). Later, when Wichita became a railhead, the Arkansas River-Grouse Creek "quarantine area" assumed even greater historical significance.

Article 16 of the Cherokee Treaty of March 21, 1866, provided that the United States Government was authorized to "... settle friendly Indians on unoccupied [Cherokee] lands west of 96 degrees. . ." This was the legal instrument that provided future reservations for the Kansa (Kaw), Ponca, Otoe-Missouri, Tonkawa, and Pawnee tribes in the Indian Territory. Essential to the platting of these new reservations was a survey of the southern boundary of Kansas. Located less than a quarter of a mile east of the Arkansas River on the present Kansas-Oklahoma boundary is a particularly significant historical marker, which is within the confines of Kaw Lake in southern Kansas. The marker is native stone. Inscribed on the north face is a "K",

indicating Kansas; on the south face is inscribed "I T", indicating Indian Territory; on the west face is inscribed "1871", indicating the survey date; and on east face is inscribed "LAT 37°", indicating the legal boundary. This exceedingly significant marker was placed and certified by the federal government, with the following notation in the General Land Office records, Record Group 49, National Archives: "Diagram of the 'North Boundary of the Cherokee Country [Indian Territory] between the Neosho and the Arkansas Rivers (constituting the boundary line between the State of Kansas and the Cherokee Country). . . ' Manuscript on tracing cloth. 1 inch to 1.2 mile. 22 x 27. Marked 'Copy made in General Land Office from Original on file in Indian Office.'"

The historic significance of the Kaw Lake area as a commercial navigation point can hardly be overemphasized. Following are just a sample of the activities as reported in contemporary newspapers: June 6, 1878--arrival of the "Aunt Sally" at Arkansas City from Little Rock; Amos Walton's steamer trip from Grouse Creek to the Kaw Agency at Washunga and on to Fort Smith, Arkansas, May 6, 1880; boat load of carpenter materials from Arkansas City to Little Rock, July 4, 1877; the July 8, 1877, load of drugs aboard a thirty-five foot boat from Sedgwick County, Kansas, to Fort Smith, Arkansas; load of corn from Arkansas City to the Pawnee Agency, December 12, 1877; 700 bushels of corn arrives at Little Rock from Arkansas City, August 14, 1878; and 12,000 pounds of potatoes for the Pawnee Agency leaves Arkansas City April 2, 1879.

After 1880 the Midland Valley and Missouri Pacific Railroad Companies, with rail sites in the Kaw Lake area of southern Kansas, were able to eliminate what otherwise would have been a much cheaper means of commercial water transportation for southern Kansas and the soon to be allotted Indian reservations in what is now northern Oklahoma. That they were able to obtain corporate mergers with larger companies well subsidized by the federal government explains this rather abrupt shift from water to rail transportation. Their rusty rails in the Kaw Lake flood area are ultimate testimony to the futile machinations of short-sighted politicians and lobbyists who were only too eager to respond to the demands of special interests at particular times.

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IV. THE SURVEY

The survey of Kaw Lake lands in Kansas had to deal with a variety of field conditions affecting visibility of the ground surface. Regularly cultivated fields ranged from freshly worked ground, to sprouting crops, to mature crops, to fallow conditions where the ground surface was covered with weeds. Pastures consisted of both tilled and planted fields and natural uncultivated grasslands. Other untilled ground along stream banks and terraces was covered with riverine woodlands, while stream bottomlands supported dense tangles of weeds and other annuals.

Most cultivated fields permitted reasonable ground visibility, especially when the survey crews could revisit a field at selected times. On the other hand, fallow fields, pastures, and untilled woodlands and bottomlands were densely covered by vegetation that effectively impaired visibility of the surface indications of archaeological sites. Because of this wide diversity in field conditions, several different techniques were employed to maximize our chances for locating cultural resources.

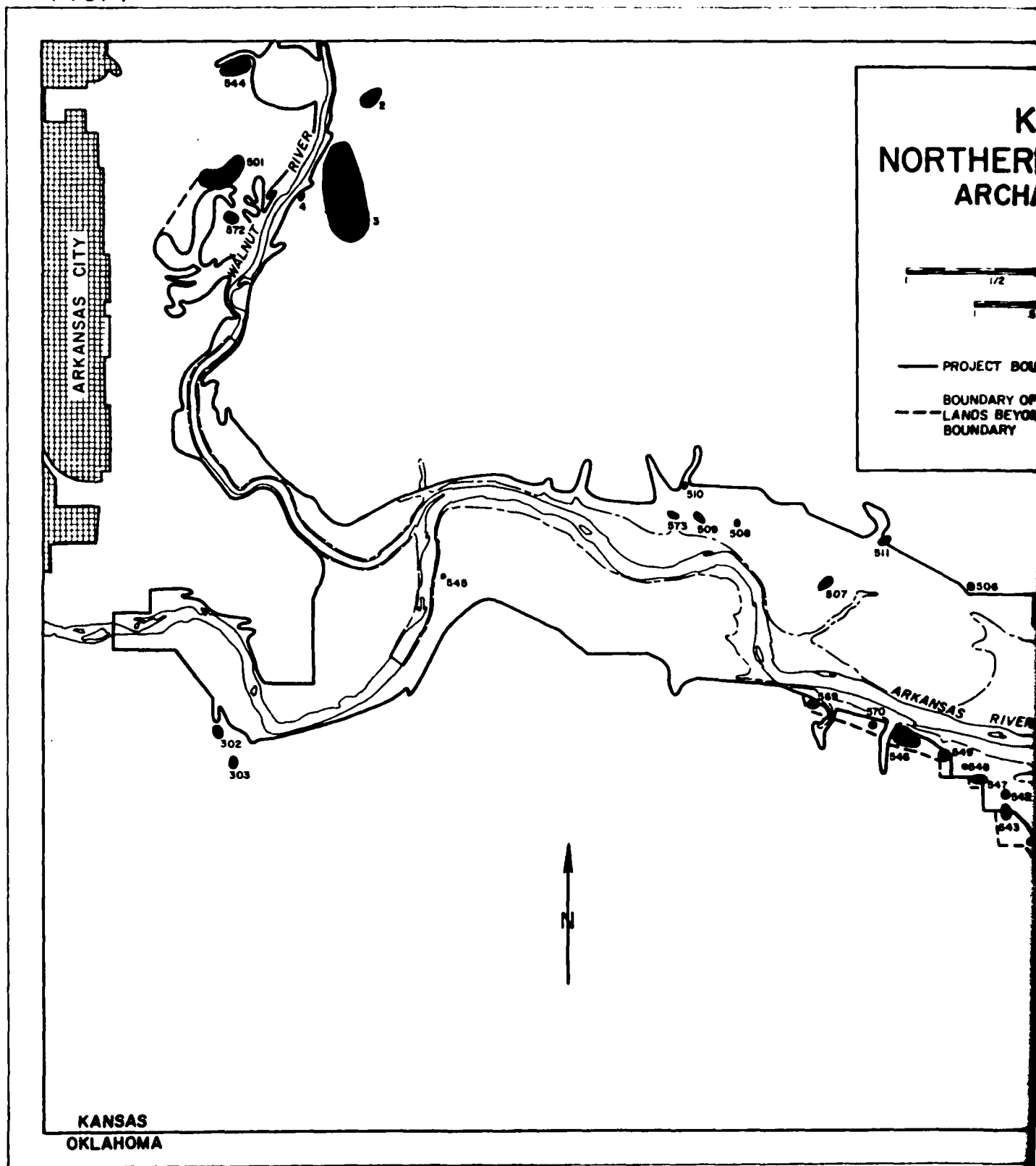
While the great bulk of our energies focused on conducting a complete inventory of specified project lands, several factors caused us to also investigate lands immediately adjacent to project boundaries. Several archaeological sites actually straddled the property border. In other instances, surface drift materials from archaeological sites immediately adjacent to the project lands occurred within the property. Several informants told of sites located close to the project boundaries. Finally, the topography transected by the property boundaries frequently appeared to have a high probability for archaeological site situations.

Consequently, in several instances (Fig. 4) the survey team examined lands outside the actual project property. Archaeological sites in these locations adjacent to the Kaw Lake property could be acquired by the U. S. Army Corps of Engineers as part of future improvements to Kaw Lake. Some of these sites could also be threatened by development of access routes through private land to portions of the lake. Archaeologically, all of these sites belonged to clusters that extended onto federal property. Their investigation is essential to help assess the full significance of the sites actually owned by the federal government. We feel strongly that no assessment of Kaw Lake sites could be adequately made without detailed consideration of these obviously related sites on adjacent lands.

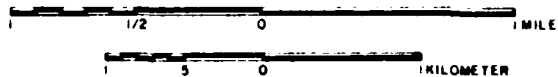
Archival and Literature Search

To develop a background of known culture history and summarize

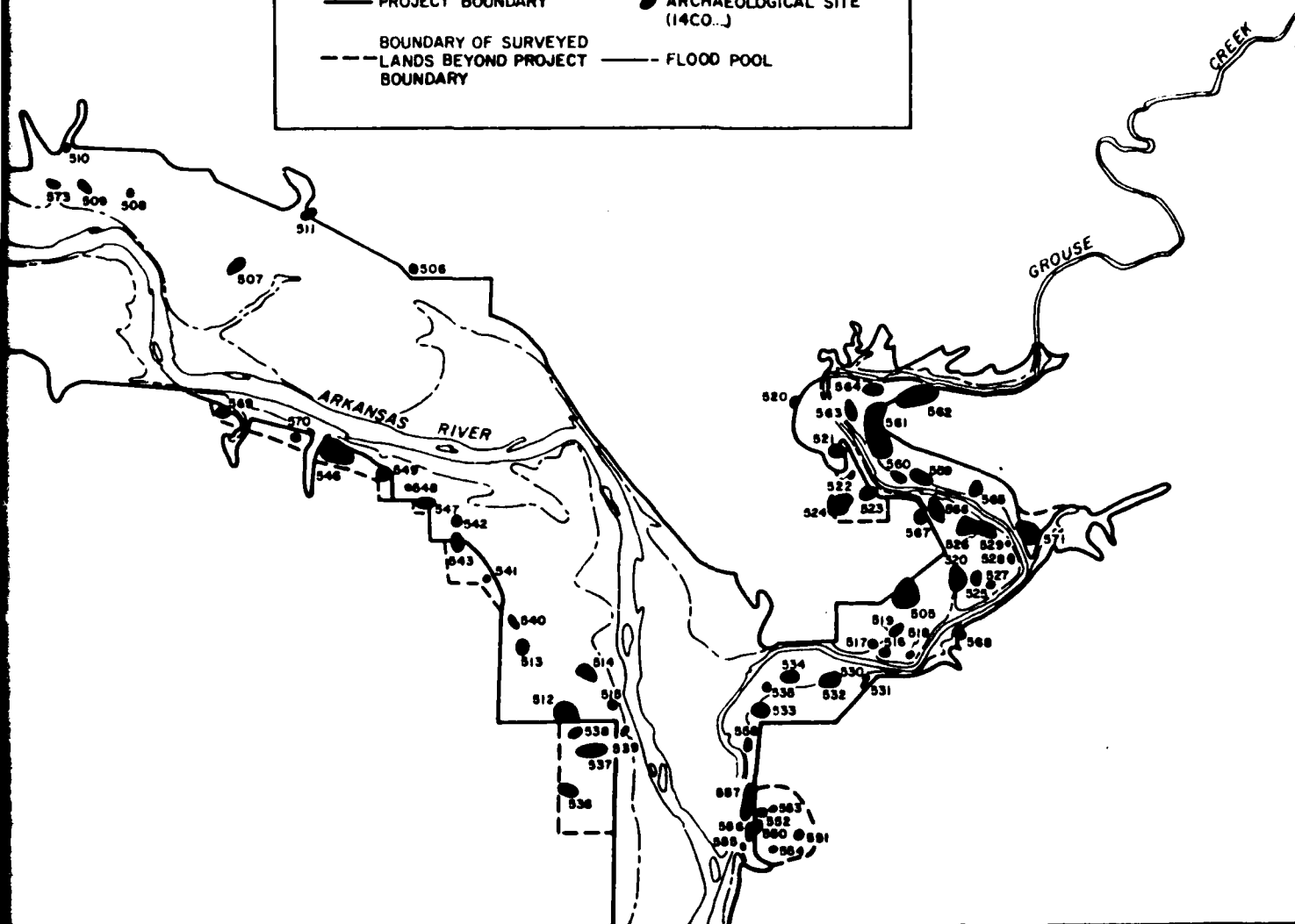
FIG. 4



KAW LAKE NORTHERN SECTION (KANSAS) ARCHAEOLOGICAL SITES



- PROJECT BOUNDARY
- ARCHAEOLOGICAL SITE (14CO...)
- - - BOUNDARY OF SURVEYED LANDS BEYOND PROJECT BOUNDARY
- - - FLOOD POOL



previous work, the existing literature on Kansas and Oklahoma archaeology was consulted in the Ablah Library at Wichita State University. Special attention was paid to those publications that dealt specifically with the Kaw Lake district. All these resources are listed in the bibliography of this report.

As a step to help identify known archaeological and historical sites within the project area, the following archives and files were specifically consulted:

- 1) The National Register of Historic Places
- 2) The Register of Historic Kansas Places
- 3) The Kansas State Archaeologist Office
- 4) The Kansas State Historic Preservation office
- 5) The Archaeology Laboratory, Wichita State University

Local Collector and Landowner Interviews

Two directions were chosen to pursue evidence of cultural resources from the knowledge of local residents and persons directly knowledgeable about the project area. It was necessary for the survey crew to request rights-of-entry to private lands surrounding the U.S.A.C.E. project lands. It was also desirable to seek access permission from persons raising crops in fields leased from the U.S.A.C.E. When directly communicating with these individuals, the survey crew specifically inquired about "Indian arrowheads" and "flint chips" having been observed on the land. The following individuals provided useful information:

Albert Baird	Cowley County, Ks., farmer and collector
Jim Denson	Silverdale, Ks., collector
Ross Sherwood	Cowley County, Ks., landowner
Max Allsip	Silverdale, Ks., collector
Mr. Marrs	Cowley County, Ks., farmer and collector
Mr. Brown	Cowley County, Ks., landowner
F. Bossi	Cowley County, Ks., landowner
Don Glenn	Kay County, Oklahoma, collector

Several other individuals provided assistance in identifying sites even though they lived outside the immediate project vicinity. Steve Capel of the Kansas State Forestry Fish and Game Commission furnished leads to other informative persons and shared his familiarity with the project area. William Dickerman of Arkansas City offered information about sites and collectors in the project area. Also helpful was Jack Burnett of Wichita State University who was raised in Arkansas City.

Field Survey

The very diverse ground conditions led to the employment of two distinct survey techniques. Where the land had been cultivated and crops or weeds did not seriously impair visibility, linear pedestrian transects were conducted at intervals of no more than 10 meters between surveyors. As cultural material was encountered, it was left in place and the location "flagged" with wire marker flags. This procedure continued until the boundaries of lithic and other cultural material scatter could be determined. A sketch map was then made of the surface scatter, noting topographical features, concentrations of flakes and artifacts, and their intrasite distributions. A photograph was taken and "pick-up units" were designated at this point.

If possible, material was bagged together if its distribution on the surface suggested a concentration attributable to loci of apparent prehistoric use and subsequent discard. This was most easily accomplished where concentrations were found on homogeneous topography. Concentrations of material were more commonly found as a result of secondary natural deposition, such as at the bottom of a bench or in the depressions formed by modern agricultural terraces. In these instances, the pick-up units were designated as downslope wash, or by other similar labels. Where no discernable units could be seen on the surface, material was arbitrarily assigned to pick-up units relating to topographic features within the site or to roughly equal size divisions. An attempt was made to keep pick-up units within the entire survey about the same size, approximately 30 meters in diameter, in order to account for the displacement of cultural materials by modern agricultural practices. By keeping the pick-up units of this survey within 30 meters, it was felt little information would be lost with the least effort and time consumed in collection.

Where vegetation prohibited this standard survey technique, such as in fallow fields overgrown with weeds or in uncultivated areas of trees and shrubbery, shallow shovel tests were dug at intervals of 15 meters. In cultivated fields these shovel tests extended approximately 20 centimeters deep. In areas that had never been cultivated, however, the surface was first skimmed of leaves and branches, and 5 to 10 centimeters were cleared first, so as not to disturb any cultural features present. If no features were detected, deeper shovel tests of up to 30 centimeters were dug in zones where the soil was this deep. All materials encountered in this manner were collected and recorded by individual shovel test locations.

Those surveyed sites that had not been previously disturbed by modern agricultural practices were treated slightly differently than sites that had been disturbed. Greater care was taken in recording the exact location of material picked up from the surface.

All 3700 acres of project lands were subjected to intensive pedestrian survey with the following exceptions: the actual stream channels and sand bars; about 60 acres of bottomland in the north half of Section 2, T35S, R4E, covered by extremely dense vegetation; and about 40 acres of private land on the north bluffs of the Arkansas River in Section 1, T35S, R4E, where access was not granted. In addition, about 200 acres of private lands adjacent to the project boundaries were included in the survey because of local informant leads to sites on these lands. A total of 127 person/days were spent on this field survey (Fig. 4).

Laboratory Procedures

All materials collected during survey were brought to the Wichita State University Archaeology Laboratory for cleaning, cataloging, and analysis. Individual tools were assigned separate catalog numbers that were written on the artifacts. Lithic debitage from each pick-up unit was assigned a single catalog number and bagged together.

All tools, such as points, scrapers, drills, knives, etc., and any bifacially worked or modified flakes are individually described in the surface collection section for each site description in Chapter V. The remainder of the chipped stone material, debitage, has been tallied only where significant to the individual site description.

Several problems were encountered in deciding what units would be meaningful in describing and interpreting the debitage recovered for the entire survey. The majority of sites were located in plowed fields that have been "picked up" by collectors for many years. While most collectors limit themselves to the "whole" points or artifacts, many of the informants reported picking up "buckets" of the "prettiest flints", meaning that there had been a non-random selection for the brighter and more appealing pieces of heat-treated Florence chert. In no way can we assume that the surface collection of debitage represents a pristine sample.

Environmental Setting

The Kansas Section of Kaw Lake lies entirely within the Arkansas River Lowland section of the Central Lowland physiographic province and specifically in the Great Bend Lowland division (Schoewe 1949). The Wellington Formation underlies deep recent alluvia and remnant Pleistocene terraces within the Arkansas River valley. This valley narrows somewhat south and east of Arkansas City where it passes

between relatively high and steep bluffs capped by flat-lying Nolans and Wreford Limestones. In this zone where the Arkansas River brushes against the western portion of the Flint Hills, its valley narrows to between one and one and one-half kilometers in width. The lower Grouse Creek valley reaches a maximum width of about one kilometer before flowing into the Arkansas.

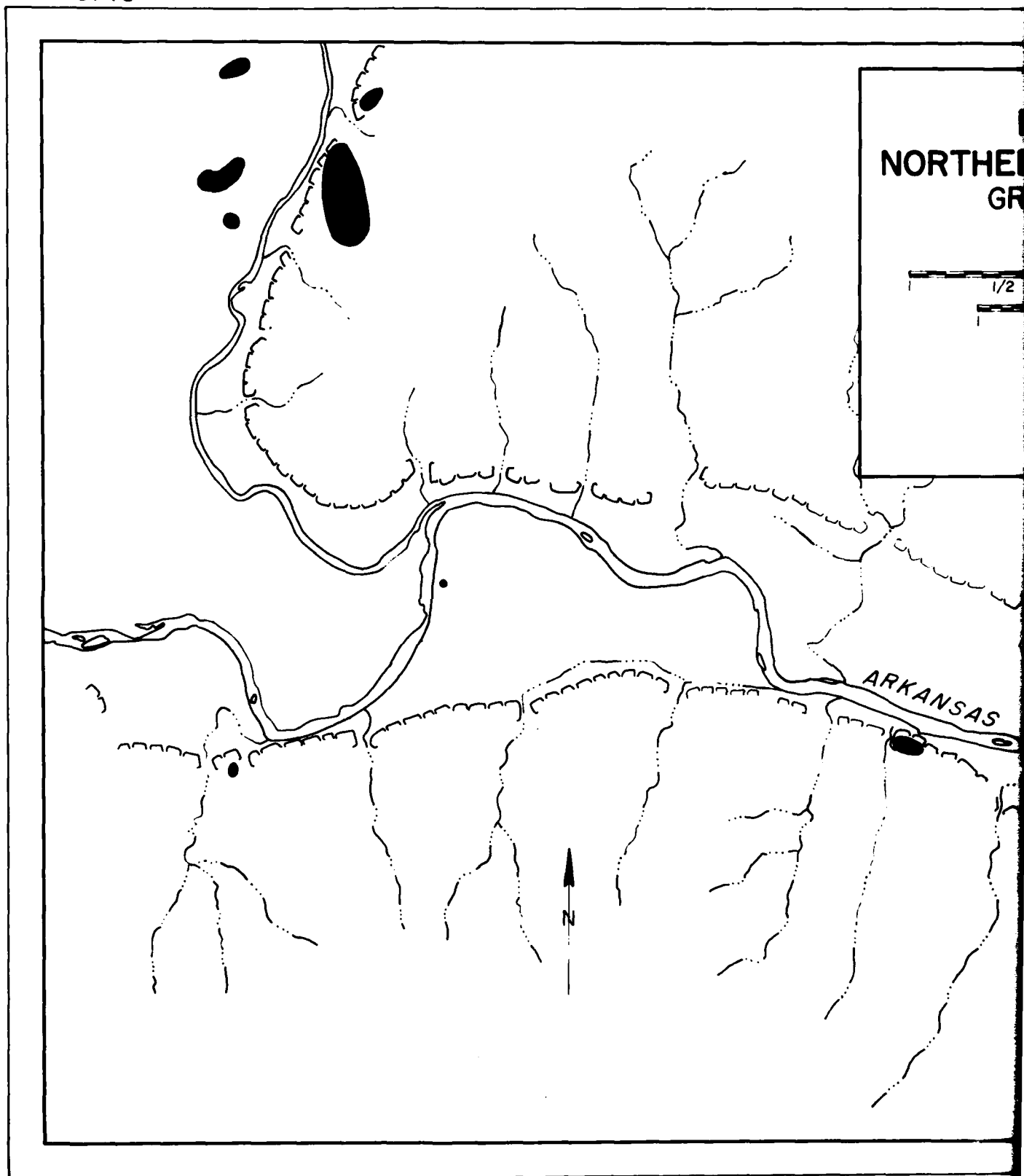
Elevations range from 1030 to 1150 feet above mean sea level producing a relief of about 100 feet along the valley borders. Nearby hills away from the bluff edges exceed 1200 feet in elevation. These uplands present a gently rolling hill surface covered with very little or no soil. Consequently, limestones, including cherts, crop out on virtually all slopes.

Grasslands dominate the uplands with scattered scrub junipers and bunches of burr oak. The stream valleys, often including the bordering bluffs, were naturally covered with dense forest including oak, walnut, hackberry, ash, elm, sycamore, hazel, and plum brush. The full extent of this riverine woodland during 1841 has been reconstructed from the notes of the Government Land Office survey in the archives of the Kansas State Historical Society (Fig. 5).

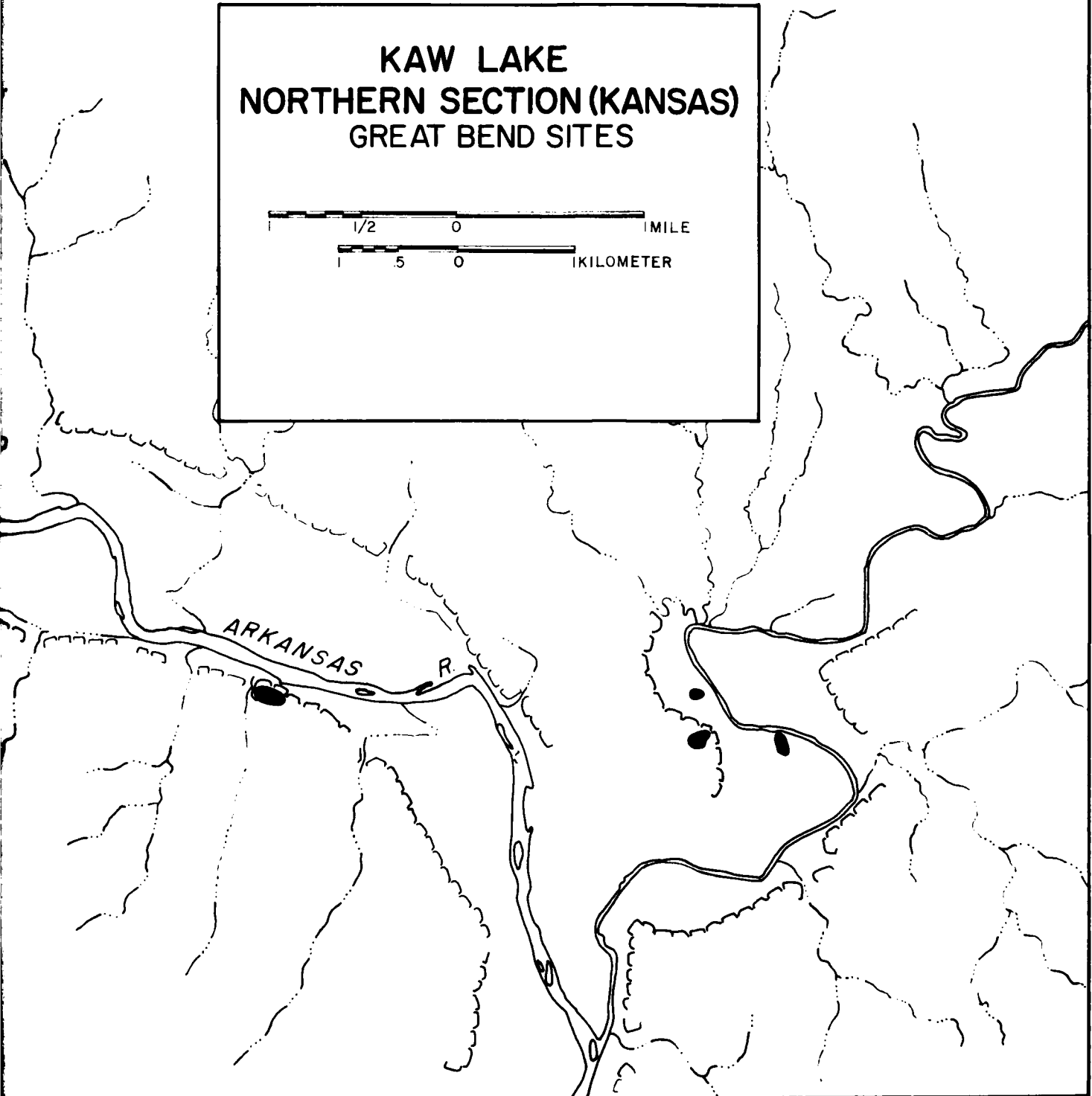
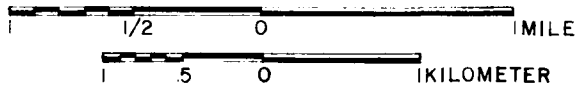
Because of its central location on the North American continent, Kaw Lake experiences typical continental extremes in climate. Winter temperatures are generally mild, but cold spells occur periodically and steady winds create some extreme low wind chills. Summers are hot, but relatively dry. Mean annual precipitation at Arkansas City is 32.18 inches with extremes of 18 and 48 inches occurring in successive years. The frost-free growing season averages 188 days in length with recorded extremes of 141 and 213 days (Bayne 1962).

Deep sandy soils of the Yahola-Lincoln association fill the stream floodplains. On the bluffs and uplands to the north and east of the Arkansas River are soils of the Sogn-Summit-Labette association. These tend to be very shallow soils covering rolling limestone hills and escarpments. To the south and west of the Arkansas River may be found the Norge-Vanoss association of deep loamy soils on nearly level to strongly sloping situations (U. S. Soil Conservation Service 1967).

FIG. 15



**KAW LAKE
NORTHERN SECTION (KANSAS)
GREAT BEND SITES**



V. CULTURAL RESOURCES IDENTIFIED

The intensive cultural resource survey of the Kaw Lake properties in Kansas identified 73 prehistoric archaeological sites within or very close to the property boundaries. Fifty-three (53) of these sites actually lie on U.S.A.C.E. managed lands, while the other twenty (20) lie immediately adjacent to or within a very short distance of the boundaries. Only four of the sites had been previously known and recorded by professional surveying agencies; 69 are newly defined. No historic sites were observed within the project area, although several, probably historic, buildings stand on grounds above the maximum flood pool level and outside the project boundaries.

All sites have been assigned numbers in the State of Kansas site survey system and are described individually in numerical order. All four previously surveyed and recorded sites were located and resurveyed. Their revised descriptions are included. Several previously recorded sites in the vicinity of Arkansas City fall well outside the project boundaries and are not included in this listing. They are, however, frequently referred to in sections of this report.

Specific site locations are recorded on U.S.G.S. topographic maps and on survey forms, copies of which are submitted separately to the U.S. Army Corps of Engineers, Tulsa District office.

14C0302

(ADJACENT TO FEDERAL LAND)

Description:

The site is located on the top of a terrace on the south side of the Arkansas River and east of a small tributary, Toplift Creek, and west of a small remnant tributary. The field it lies in is cultivated. The site covers approximately three acres.

Surface Collection:

A 1971 Kansas State Historical Society survey by Reynolds collected the base of a corner-notched projectile point, a scraper, knife fragments, and chert flakes, as well as fire-reddened limestone.

Interpretation:

As no diagnostic artifacts were found, this site cannot be given a firm cultural affiliation. The corner-notched point does suggest a possible Plains Woodland connection.

Condition:

The site has been disturbed by plowing.

Project Impact:

It lies above the elevation of Kaw Lake's flood pool and it should not be adversely affected by the lake.

Significance:

This site should be preserved and protected against damage by users of the Kaw Lake. The relatively sparse materials and lack of appropriate diagnostic artifacts would not seem to warrant inclusion on the National Register of Historic Places.

14C0303

(ADJACENT TO FEDERAL LAND)

Description:

The site lies on sloping high ground on the south side of the Arkansas River. It is west of a small unnamed tributary and east of Toplift Creek. The site covers approximately three acres.

Surface Collection:

A 1971 Kansas State Historical Society survey by Reynolds found broken knives, the base of a small corner-notched point, scrapers, modified flakes, chert flakes, and cores. The survey by Wichita State University produced a thick, shell-tempered sherd, apparently Cowley Plain.

Interpretation:

The Cowley Plain sherd argues for a Great Bend Aspect occupation, probably a temporary camp of some sort, while the corner-notched point suggests a possible late Plains Woodland cultural affiliation.

Condition:

The site has been disturbed by plowing.

Project Impact:

It lies above the elevation of the Kaw Lake flood pool and it should not be adversely affected by the lake.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. The relatively sparse materials and information would not appear to warrant inclusion on the National Register of Historic Places.

14C0320

Description:

The site lies on a low terrace within a bend of Grouse Creek, on its west side. A meander scar has cut through the center of the site. There is a thick lithic scatter on the surface. The site is approximately 125 meters east to west by 100 meters north to south.

Surface Collection:

The surface collection made in 1978 by William Brogan of the Kansas State Historical Society includes large chert flakes, an historic earthenware pot, a knife fragment, and a small hammerstone.

The 1979 Wichita State University survey collection was made in three pick-up units: one on the bench east of the meander scar, one in the scar itself directly west of the first area, and the third in an area of dark soil in the meander scar, in the northern part of the site. The east bench produced small bits of shatter. The south area, in the meander scar, produced quite large chert cores, bifaces, two sandstone metate fragments, and chert shatter. The third area produced utilized flakes and shatter. The expanded convex base of either a biface or point was found in the area of the east bank.

Interpretation:

Although no clearly diagnostic artifacts were found at this site, it lies on the same terrace as two nearby, possible Plains Woodland, sites--14C0519 and 526. However, a possible Great Bend Aspect site (14C0566) is located to the north on the same terrace. Site 14C0320, then, cannot yet be classified as Plains Woodland although this affiliation appears most likely. Further collection, and even testing, will be required to determine this. The abundance of large crude bifaces, flakes, cortex, and chert cores suggest that this site was a primary chert processing center where quarried chert was roughed out into blanks before it was made into tools or transported to another site for tool making.

Condition:

The site has been disturbed by plowing, and has been partly eroded away by an old meander of Grouse Creek.

Project Impact:

As Kaw Lake's flood pool will occasionally reach into the meander scar, further erosion could take place during time of flooding. A sewage disposal pond may have disturbed part of the southern portion of the site.

Recommendation:

Because of possible future flood damage, this site should be periodically monitored to assess any possible threat from erosion and to recollect its surface. Such recollection should provide additional information about the nature of the site and determine whether future testing or mitigation might be desired. The relatively sparse information from this site, plus its present unstable condition, would not warrant its inclusion on the National Register of Historic Places, but the richness of artifact material would indicate eligibility for inclusion on the Register of Historic Kansas Places.

14C0501

(ADJACENT TO FEDERAL LAND)

Description:

Site 14C0501 lies on a terrace on the west side of the Walnut River. It covers an area of approximately 200 meters north to south by 400 meters east to west. The site is separated on the south from 14C0572 by a meander scar.

Surface Collection:

A fairly large and varied surface collection was collected in one pick-up unit. Non-diagnostic materials include waste flakes, decortication flakes, utilized and modified flakes, bifaces, and smoothed sandstone (possibly a metate fragment). Diagnostic artifacts were also found. The projectile points include four Fresno points--all probably of Florence Chert (three heat treated); three probably Fresno bases; a Fresno point missing its tip; an unidentified point tip; and a medium-sized point with convex sides, straight base, and only one side retouched. This last point does not appear to be a Fresno, and may be a preform. A number of plano-convex end scrapers

were recovered, as well as two expanding stem drills, a drill bit midsection, several whole (and fragmentary) beveled knives, and two grooved sandstone shaft abraders (Fig. 6).

The ceramics are all apparently shell tempered, and all are basically smooth surfaced, although four have one or more scorings on the exterior. There is a fragment of a rope-like pot handle in addition to the body sherds. All of these sherds appear to be Cowley Plain, a Great Bend Aspect Ware.

Interpretation:

The shell-tempered ceramics and Fresno points classify this as a Great Bend Aspect site, and the other artifacts--shaft abraders, beveled knives, and plano-convex end scrapers--fit in well with this interpretation. The presence of a variety of tools (drills, shaft abraders, scrapers, knives, etc.) suggests that this site was at least a campsite, although it may have seen more substantial and permanent occupations. The site may be part of a complex of sites along the west bank of the Walnut River, since Cowley Plain sherds found at 14C0544 to the north, and a Fresno point found at 14C0572 to the south, make these possible Great Bend Aspect sites also. Site 14C0501 is separated from 14C0572 by a meander scar, and may have once encompassed it.

Condition:

The site has been disturbed by plowing, and may have been partly eroded by the meander scar along its southern edge.

Project Impact:

The maximum flood pool of Kaw Lake will fill the meander scar at the south edge of the site, but should not actually inundate the site.

Significance:

This site should be preserved and protected against damage. Its large size, the relative richness of materials, and the site's probable role as a part of a very extensive settlement of Great Bend peoples (together with 14C01 and 14C03) would all merit including this site on the National Register of Historic Places.

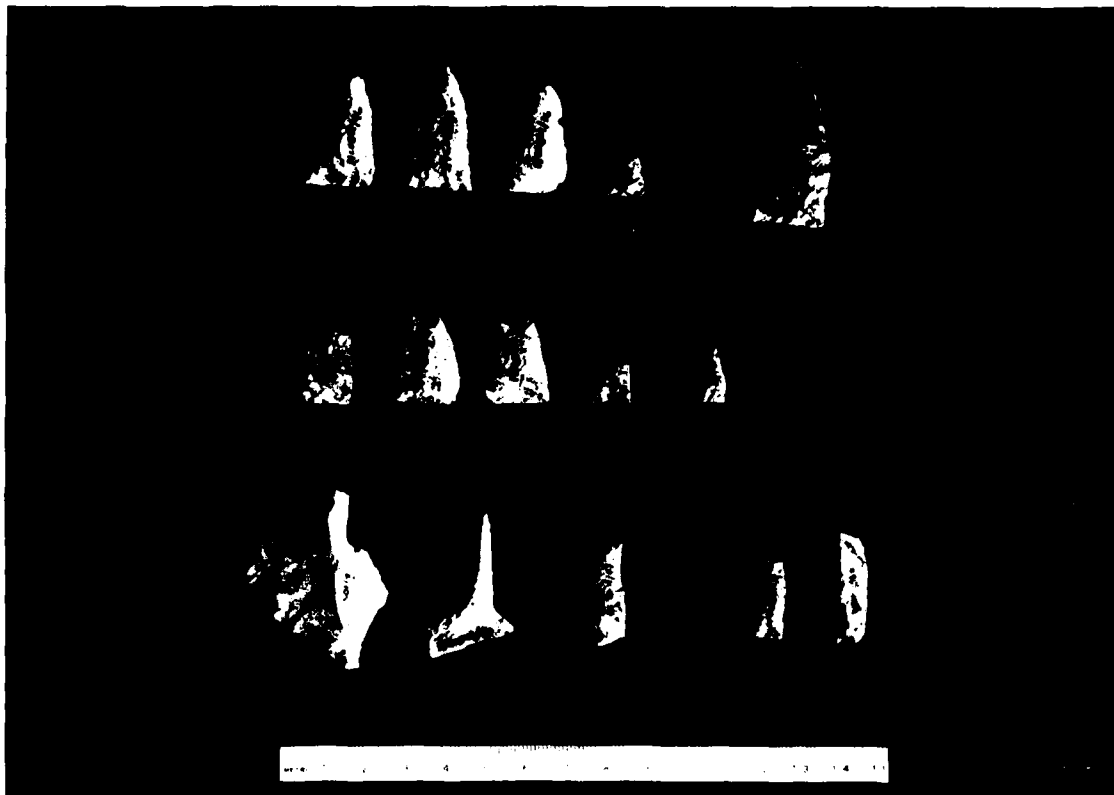


FIGURE 6. GREAT BEND POINTS AND DRILLS
FROM SITE 14C0501

Description:

The site is located on a sandy rise to the north of the first bottom of Grouse Creek. The northern border extends beyond the limits of federally-owned land. The extent of the site is estimated at 150 x 70 meters (Fig. 7).

Surface Collection:

When first visited, the northern portion of the site was covered with milo stubble; the remaining portion was in weeds. The densest lithic concentration was found at the top of the rise and had washed out along the east sloping side. Some baked daub was also found in this area. No diagnostic artifacts or pottery were located. The site has been revisited twice under better conditions, producing additional baked daub, several fragments of grinding stones, and numerous large broken bifaces, but still no diagnostic specimens.

Testing:

Shovel tests were made at 5-meter intervals on a north-south transect starting at the east border of the site across to the top of the rise (approximately 40 meters). The exact location of each test was recorded.

Interpretation:

The site is situated in the center of the Grouse Creek Valley, but above the floodplain. The density and extent of lithic debris in such a favored location make it probable that this site was occupied over a relatively long time period by more than one cultural group. The lack of diagnostic material makes any definite cultural affiliation impossible. The presence of baked daub, grinding stones, trimmed and used flakes, and a wide range of lithic materials indicate this was a habitation site, probably of relatively large size. Since many nearby sites appear to be lithic collecting stations or primary lithic reduction sites, 14C0505 might be a central habitation location where the raw material procurers lived while conducting their quarrying and workshop activities in the vicinity.

Condition:

The site has been under cultivation for a long time and is well known by all the local collectors. This may account for the lack of artifacts found there rather than any difference in the activities performed or not performed there.



FIGURE 7. SITE 14C0505

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool and it should not be adversely affected by the lake.

Recommendation:

This site should be preserved and protected against damage by users of the Kaw Lake. Despite the lack of diagnostic artifacts, the richness of the surface materials and the prospects for subsurface features would indicate this site would meet eligibility requirements for inclusion on the National Register of Historic Places. A concentrated test (e.g. 6 x 4 meters) would probably provide much fuller information about this site's information potential.

14C0506

(ADJACENT TO FEDERAL LAND)

Description:

The visible portions of this site were found at the bottom of a slope leading to the bluffs on the north side of the Arkansas River. It is situated immediately above the floodplain in an orchard that has been terraced. An unnamed intermittent creek flows into the Arkansas River to the west of the site. The exact limits of the site could not be determined, but the landowner claimed he has seen flakes only in the orchard area, covering approximately 30 x 30 meters.

Surface Collection:

A small number of flakes were found, many with cortex, from areas where the ground cover of grass and tree roots permitted. No diagnostic artifacts were found. The landowner did not remember ever finding any points in this area.

Interpretation:

Since the full extent of the site is uncertain and no diagnostic artifacts were found, the most likely interpretation of this site is that it was a lithic reduction center, most probably associated with an unspecified habitation site farther up the bluff.

Condition:

The site that has been collected has been terraced; if the site extends farther to the north, that portion may be undisturbed. No material was found to the south on the floodplain (U.S.A.C.E. land).

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by the lake.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge would not warrant its inclusion on the National Register of Historic Places.

14C0507

Description:

The site is located on the north floodplain of the Arkansas River in a level area between two old tributary scars that run east and west. A loose lithic scatter was spread out in a northeast-southwest line, and several pieces of limestone approximately 15 cm. in diameter were found along the east side of the site.

Surface Collection:

Stone flakes, bone fragments, and chunks of limestone. No diagnostic artifacts were found.

Interpretation:

The site's location on the floodplain near a site that produced late prehistoric material suggests it may have been utilized at that same period. Materials that were older would most probably have been buried or washed away.

Condition:

The site is presently under cultivation.

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by the lake.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge would not warrant its inclusion on the National Register of Historic Places.

14C0508

Description:

The site is located on the edge of the first bench rising above the north floodplain of the Arkansas River. A few flakes and several fist-size pieces of limestone were found eroding out of the bench and washing downslope in an area approximately 15 meters in diameter.

Surface Collection:

Two modified flake scrapers and three chert flakes. No diagnostic artifacts were found.

Interpretation:

The site's location immediately above the floodplain and adjacent to Site 14C0509 that produced late prehistoric artifacts would indicate a possible association with it.

Condition:

The site is presently under cultivation.

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by the lake.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and materials would not warrant its inclusion on the National Register of Historic Places.

14C0509

Description:

The site is located immediately to the east of a tributary flowing into the north bank of the Arkansas River. A loose lithic scatter, 50 x 40 meters, was found on two small rises, designated A and B, along the edge of a bench above the floodplain.

Surface Collection:

A midsection of a biface made of Smoky Hill jasper, a modified flake of Alibates dolomite, a plano-convex end scraper of thermally altered Florence chert, and a very small eroded potsherd with crushed

limestone temper were found. No other diagnostic artifacts or pottery were recovered.

Interpretation:

The site's location close to the floodplain, and the presence of pottery and non-local lithic types known to have been traded during later prehistoric times, indicates this site was probably utilized by sedentary Plains farmers. The small size of the site suggests its use as a temporary campsite.

Condition:

The site has been cultivated.

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by the lake.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge would not warrant its inclusion on the National Register of Historic Places.

14C0510

Description:

Small thinning flakes were noted eroding out of a footpath behind a barn on the edge of a terrace above the floodplain on the north bank of the Arkansas River. A tributary flows immediately to the west of where the flakes were first noted, and flakes were also found eroding out from tree roots along the edges of the cut bank of the tributary. The deposit appears to be very shallow. The precise extent of the site could not be determined since most of the ground was covered by pasture. Construction of the barn may have disturbed the site. The site covers an area of at least 30 x 60 meters.

Surface Collection:

One small biface fragment and the snapped-off end portion of a plano-convex end scraper, both made from local heat-treated chert, one crude biface, 6 utilized flakes, and 37 chert flakes were collected.

Interpretation:

The plano-convex end scraper and the site's proximity to 14C0509, which produced late prehistoric material, suggests it could be associated with that site, possibly as a lithic work area on the edge of the tributary.

Condition:

The site is eroding away on the west perimeter. Barn construction appears to have disturbed part of the site.

Project Impact:

It lies above the upper elevation of Kaw Lake's maximum flood pool, and it should not be adversely affected by the lake.

Recommendation:

This site should be preserved and protected from damage by the users of Kaw Lake. Our present sparse knowledge and materials would not warrant its inclusion on the National Register of Historic Places.

14C0511

Description:

A scatter of flakes was found in an area covering 40 x 40 meters eroding downslope off a terrace above the north floodplain of the Arkansas River. A small tributary flows on to the Arkansas River from northwest of the site. The north edge of the site remains undefined since it was not in cultivation but in weeds; only the southernmost wash from the site occurs on federally-owned land.

Surface Collection:

No diagnostic artifacts were recovered. Other specimens collected included 3 utilized flakes, 35 chert flakes, an abraded piece of sandstone, and 3 sherds of historic crockery.

Interpretation:

No cultural affiliation can be determined. The materials that were picked up most probably represent downslope wash from the unsurveyed portion of the site lying on higher ground.

Condition:

The site has been cultivated.

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by the lake.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and recovered materials would not warrant inclusion on the National Register of Historic Places.

14C0512

Description:

The site extends along the top of the loess bluffs on the south side of the Arkansas River over an area of 150 x 90 meters. A section road marks the southern boundary, and chert flakes are eroding out of the road cut. The site might extend across the road to the south, but a farmhouse, lawns, and barns obscure the ground surface there. Directly south of the farm, Site 14C0538 was located, which may be part of 14C0512.

Surface Collection:

No diagnostic artifacts were found; materials include biface fragments, chert cores, and a chert end scraper, as well as utilized flakes and shatter. These were all flagged before collection, but no activity areas could be discerned. Surface materials were picked up in five arbitrary units. All together, 5 biface fragments, an end scraper, retouched and utilized flakes, 3 chert cores, numerous chert and quartzite flakes, and lumps of sandstone and limestone were collected.

Interpretation:

This is a very large and well-known site. The lack of artifacts may result from years of surface collecting by local residents. While it may be impossible to place the site in a cultural category, its location along the bluff top on the south bank of the Arkansas River links it to other sites found in similar situations on the survey. Two small Scallorn points were found nearby at 14C0513 on the same bluff line, and the other at 14C0515 where it could have washed downslope from 14C0512. It is probable that the site was in use during Late Woodland.

Condition:

The site is in a cultivated field and has probably been dissected by road construction. The soil is deep loess that has been terraced to prevent erosion. Under these conditions, it seems improbable that any material, even that beneath the plow zone, remains in situ, and the distribution of debitage represents displacements by farming and erosion.

Project Impact:

This site lies well above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by the lake.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. Although its apparent damaged condition might preclude its eligibility for inclusion on the National Register of Historic Places, its large size and apparent former importance within a cluster of nearby sites indicates it should at least be nominated to the Register of Historic Kansas Places.

14C0513

Description:

The site is found on the top of the loess bluffs to the south of the Arkansas River. It is bordered on the north by a farm road, but may extend north across the road towards 14C0540. A sparse lithic scatter extends along the top of the ridge for approximately 100 meters from the road on the same bluff line as 14C0512. Material is washing downslope for approximately 80 meters.

Surface Collection:

The only diagnostic artifact found was a small Scallorn point. No pottery was recovered. All lithic debris was bagged in two arbitrary pick-up units that dissect the site into north and south halves. The south half produced the Scallorn point, 2 flake scrapers, 7 utilized flakes, and 34 chert flakes. The north half produced 2 chert cores, 14 utilized flakes, 45 chert flakes, and a bone fragment.

Interpretation:

On the basis of the Scallorn point, this site may represent a Late Woodland occupation.

Condition:

The site is in a plowed field that has been terraced. The distribution of lithic debris probably represents displacement by farming and erosion.

Project Impact:

This site lies well above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by it.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. Its apparent Late Woodland cultural affiliation and relatively uncommon bluff edge situation would qualify it for inclusion on the Register of Historic Kansas Places.

14C0514

Description:

The site is situated immediately above a cut bank (2nd terrace?) above the south bank of the Arkansas River. It is separated into two units, each 20 x 20 meters in area, by the scar of an old tributary.

Surface Collection:

A sparse lithic scatter was encountered and bagged according to the units separated by the drainage channel. No diagnostic material was found. Locus A produced one utilized flake and 12 chert flakes; Locus B yielded 6 chert flakes and a bone fragment.

Interpretation:

No cultural affiliation can be given to the site. The material found appears to be eroding out of the terrace, and does not seem to be downslope wash from sites higher on the loess bluffs.

Condition:

The site has been disturbed by cultivation. Downslope erosion does not seem to be displacing this site to the same degree as sites on higher elevations since it is on flatter ground.

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by it.

Recommendation:

This site should be preserved and protected against damage by the users of Kaw Lake. Our present very sparse knowledge and recovered materials would not warrant its inclusion on the National Register of Historic Places.

14C0515

Description:

Lithic debris was found in an area of 20 x 30 meters on the lowest man-made terrace on the loess bluffs to the south of the Arkansas River. The site may lie at the edge of a second terrace at the same elevation as 14C0514 and directly below 14C0512. It could represent downslope wash from 14C0512 that has collected in the contour of the lowest farming terrace, or it could be a completely separate site.

Surface Collection:

A small Scallorn point was the only diagnostic artifact found. No pottery was noted. Other lithic materials included a chert core, 3 utilized flakes, 2 pieces of modified limestone, and 35 chert flakes.

Interpretation:

On the basis of the Scallorn point, a Late Woodland occupation is indicated for the site, which may be associated with 14C0512 and 14C0513.

Condition:

Farming has disturbed the site.

Project Impact:

This site lies only a few feet above the level of Kaw Lake's maximum flood pool where it could be subject to damage if the lowest farming terrace erodes.

Recommendation:

This site should be periodically recollected to monitor future possible flood damage, and to gain more knowledge of its contents. Our present very sparse knowledge would not warrant its inclusion on the National Register of Historic Places.

14C0516

Description:

The site is on the toe of a bench to the north of Grouse Creek. Lithic debris is eroding out of the bench over an area of 20 x 20 meters. A recent meander scar separates the site from 14C0517 to the west.

Surface Collection:

A large expanding stem point base of thermally-altered banded Florence chert was found. This most closely resembles the Williams point type, as it is used in northern Oklahoma (Young 1978), and is similar to the Ellis type as used in Kansas (Bell 1960: 32). Twenty-four chert flakes, but no pottery, were also collected.

Interpretation:

Both Ellis and Williams points are associated with Middle Woodland components in both Kansas and Oklahoma. The site is buried and eroding out of the bench at the edge of a recent meander scar, the same scar that has exposed other Middle Woodland sites (14C0320, 14C0566) in the same area. It most probably is part of a large Middle Woodland occupation of lower Grouse Creek.

Condition:

The site is in a plowed field. New stream cutting action during flooding is eroding the site.

Project Impact:

The site lies just at or slightly above the maximum expected flood pool level of Kaw Lake, and it could be further eroded by wave action when the flood pool is full.

Recommendation:

This site should be minimally tested to increase its artifact collection, enhance our knowledge of its contents, and to examine the erosion processes along its one side. Our present sparse knowledge would not seem to meet eligibility requirements for inclusion on the National Register of Historic Places, but its buried condition and the new knowledge gained from testing might indicate eligibility.

14C0517

Description:

The site lies on the toe of a bench immediately to the north of Grouse Creek. Lithic debris is eroding out of the bench. A recent meander scar separates it from 14C0516.

Surface Collection:

No diagnostic artifacts were found. Four (4) utilized flakes and 7 unmodified chert flakes were collected.

Interpretation:

Although no diagnostic artifacts were found, its geographic proximity to 14C0516 suggests it also is part of a Middle Woodland occupation in the lower Grouse Creek valley.

Condition:

The site is in a cultivated field. Flooding is cutting a new channel which is washing the site away.

Project Impact:

Since this site lies just above the expected flood pool level of Kaw Lake, heightened erosion may take place during periods of flooding.

Recommendation:

This site should be minimally tested to increase its artifact collection, enhance our knowledge of its contents, and to examine the erosion processes along its one side. Our present sparse knowledge would not seem to meet eligibility requirements for inclusion on the National Register of Historic Places, but testing might modify this assessment.

14C0518

Description:

A very diffuse lithic scatter was found in an area 40 x 20 meters on the level sector of a bench above the north bank of Grouse Creek. Several scattered pieces of fist-sized limestone were found in the same area.

Surface Collection:

Two (2) utilized flakes and 13 lithic waste flakes were the only cultural materials found.

Interpretation:

No cultural affiliation can be given this site on the basis of the materials recovered. Its small size probably represents a temporary campsite, or it may be an activity area associated with a larger complex of sites in the same area.

Condition:

The site has been disturbed by plowing.

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by it.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our present very sparse knowledge and recovered artifacts would not merit its inclusion on the National Register of Historic Places.

14C0519

Description:

Lithic debris was found eroding out of both sides of a recent meander scar in an area 30 x 40 meters. This area lies in a level area to the north of Grouse Creek.

Surface Collection:

One large plano-convex end scraper and 15 lithic waste flakes were found and bagged in one unit.

Interpretation:

The end scraper, while not in itself a diagnostic artifact, is too large (length 9.1 cm., width 5.4 cm., thickness 2.6 cm.) to fall within the range of most Plains village or Late Prehistoric end scrapers. It would fall within the range for scrapers found in Middle Woodland assemblages and this would fit the site's proximity

to other Middle Woodland sites nearby (14CO320, 14CO566). Since material is only visible where the meander scar has revealed the subsoil, a cultural layer of unknown size may remain buried beneath the plow zone on either side of the meander scar.

Condition:

The site is in a cultivated field. A recent meander scar is cutting through the site.

Project Impact:

The site lies just at the expected flood pool level of Kaw Lake and could be damaged by high water levels.

Recommendation:

This site should be minimally tested to increase its artifact collection, enhance our knowledge of its contents, and to examine potential erosion damage. Our present sparse knowledge would not seem to meet eligibility criteria for inclusion on the National Register of Historic Places, but testing could modify this assessment.

14CO520

(ADJACENT TO FEDERAL LAND)

Description:

Lithic debris was found in a 50 x 25 meter area eroding out of a bench to the west of Grouse Creek. This may once have been the bank of Grouse Creek. The bench lies close to the base of the limestone bluffs.

Surface Collection:

Materials from each of three toes of the bench were collected separately. In all three bifacial implements were found, none of which were diagnostic, plus several modified and utilized flakes, a small core, and numerous waste flakes.

Interpretation:

No cultural affiliation can be assigned.

Condition:

The site is in a field that has been cultivated, but was fallow (in grass) at the time of our survey. Its position on what probably

was an old channel of Grouse Creek may mean it has been partly washed away.

Project Impact:

The site is approximately 14 feet above the expected maximum flood pool elevation of Kaw Lake, and it should not be adversely affected by the lake.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge would not seem to meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0521

Description:

The site is located on the west side of Grouse Creek on fairly level land dissected by a meander scar. Grouse Creek may have at one time been channeled to the west of the site. Flakes were found along the abandoned railway tracks that lie between the site and the present Grouse Creek channel. The site possibly extended to the east, having been disturbed by the laying of the rail line. A fairly dense concentration of lithics, pottery, shell, bone, and some fist-sized pieces of limestone was found in an area 20 x 30 meters. The site may extend off federally-owned land to the west. This land was in tall weeds and could not be surveyed. In the area surveyed, no obvious concentrations of cultural debris that might have indicated specific living features, such as houses or pits, were noted.

Surface Collection:

Several crude bifaces, a finely-worked discoidal biface fragment, the tail end of a plano-convex end scraper, a large flake scraper, two modified flakes, and what might be a Fresno point base were found. Four shell-tempered, smooth-surfaced pottery fragments were recovered. One of these represents a portion of a pot with a flattened base. Lithic debitage, shell fragments, and bone splinters were also picked up.

Interpretation:

The shell-tempered pottery (Cowley Plain) and stone tools indicate this is a Great Bend site. The exact size of the site could not be determined, so it is impossible to say if this represents a village or temporary campsite. The presence of other Great Bend material nearby on the bluff top (14C0524) might indicate this

site is part of a larger Great Bend occupation of lower Grouse Creek. Site 14C0521's situation on the floodplain corresponds with similar sites in the lower Walnut Valley. These also are in the vicinity of bluff-top Great Bend sites.

Condition:

The site lies in a plowed field. The concentration of cultural material here, in comparison to the widespread lithic scatters found at other sites, might indicate that plowing has disturbed the top of a cache pit.

Project Impact:

The site will be slightly higher than the flood pool elevation of Kaw Lake, and it should not be adversely affected by it.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. Since it may be one of the southernmost Great Bend sites, possibly an outlier to the large settlement on the lower Walnut River, this site would appear to possess information about Great Bend people's exploitive activities and hence be eligible for inclusion on the National Register of Historic Places.

14C0522

(ADJACENT TO FEDERAL LAND)

Description:

The site is located on the edge of a bench that slopes up toward the limestone bluffs to the west of the present channel of Grouse Creek. The site may at one time have been to the east of Grouse Creek or just on its west bank, since the creek appears to have been recently rerouted. Lithic debris, sandstone and limestone fragments were found eroding out of the bench in an area 30 x 50 meters. A less dense scatter of lithics extends towards the base of the bluff to the southeast near 14C0523. Downslope wash from Site 14C0523 could be mixed with materials from 14C0522.

Surface Collection:

Two collection units were designated: one contains the material found eroding out of the bench line, while the other contains the material on the more level ground towards the base of the bluff. Along with debitage, the midsection of a biface and a crude biface

were found. A small irregularly shaped end scraper (?) and a fragment of a corner-notched point were also picked up.

Interpretation:

On the basis of the point fragment alone, the site could represent a Woodland, most probably a Middle Woodland, occupation.

Condition:

The site has been disturbed by plowing.

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by it.

Significance:

This site should be preserved and protected from damage by users of Kaw Lake. Our present sparse knowledge would not appear to meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0523

Description:

This site is not well-defined spatially. Flakes were found immediately to the north of a shed behind an abandoned farmhouse, and on either side of the railroad tracks dissecting the site. Also included in this site designation are the flakes found on the steep slope of the bluff immediately to the west of the railroad tracks and along the dirt road at the base of the bluff. Another site, 14C0524, was defined on top of the bluff, but adjacent to 14C0523.

Surface Collection:

Materials found on the slope of the bluff, along the dirt road and along the railroad track, were collected separately. A plano-convex end scraper with a straight distal working end was found, plus one utilized flake and numerous chert waste flakes and chunks.

Interpretation:

Because of the poor spatial definition of the site, its disturbance by the rail line, and its proximity to other sites, no useful interpretation can presently be made. Most probably the

flakes on the slope have washed down from the bluff top site of 14C0524. Material at the base of the slope and to the east of the railroad tracks may be part of another activity area associated with 14C0524, or it may represent another site altogether.

Condition:

The site cannot be considered intact. Channel rerouting, construction of the railroad line and house, and wash from off the bluff top have all disturbed the context of cultural materials. In addition, piles of flakes were found by the survey crew on a boulder to the side of the tractor path running along the base of the bluff. It was apparent that local collectors had visited sites in the vicinity and had left behind what they did not want to carry home at the base of the bluff.

Project Impact:

The site should not be adversely affected by Kaw Lake since it lies above the projected flood pool level.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. Our present sparse knowledge and its very dubious condition do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0524

(ADJACENT TO FEDERAL LAND)

Description:

The site is located on the bluff top to the west of Grouse Creek, outside of the boundaries of federally-owned land. Lithic material was found eroding out around tree roots on the east edge of the bluff in an area that did not seem to have been plowed. Flakes were also found in a fallow field directly to the west. Lithic material was also found on the east slope of the bluff to the base of the bluff. The western and southern limits of the site could not be determined.

Surface Collection:

The base of a large Fresno point and a fragment of a discoidal biface were found on the bluff top. A plano-convex end scraper with a crude stem was found at the eastern base of the bluff. Large flakes were found in and around a chert outcrop on the eastern face of the

bluff. No pottery, bone, or shell was found.

Interpretation:

The lithic material recovered suggests this may be a Great Bend Aspect site, even though no pottery was located at the time. The site was in grass cover which makes it difficult to gain a complete sample of what cultural remains may be present at the site. The materials found were located in gullies, cattle paths, and around exposed tree roots. No shovel tests were made since this is on private land. The site could be associated with 14C0521, a close floodplain Great Bend site to the north. It could represent a lithic procurement and primary reduction site for Great Bend villages.

Condition:

Although the limits of the site could not be defined, a large portion may lie in land that has never been plowed. The western edge of what could be surveyed lies in a fallow field that appeared to have been cultivated at one time. Downslope erosion and the construction of an earthen water trough on the east slope of the bluff may have displaced cultural material.

Project Impact:

This site lies on the bluff top, well above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by it.

Significance:

This site should be preserved and protected from the users of Kaw Lake. The possible specialized function for this site, its uncommon bluff-edge situation, the prospect of an undisturbed deposit, and the richness of cultural debris are suitable criteria to merit National Register status. However, until more can be learned about this site, we would recommend listing on the Register of Historic Kansas Places.

14C0525

Description:

A very sparse lithic scatter in an area approximately 40 x 40 meters is situated on the level top of a bench surrounded on the east by a wide bend of Grouse Creek. The site is not well defined, and is very close to the eastern limits of 14C0320.

Surface Collection:

Materials collected include a large modified flake end scraper, 14 retouched and utilized chert flakes, and 58 unmodified chert flakes.

Interpretation:

The site most probably is an extension of 14C0320, and is part of a Middle Woodland occupation of the lower Grouse Creek valley.

Condition:

The site has been disturbed by plowing.

Project Impact:

It lies just above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by it.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake, although it should probably be treated as a part of 14C0320. As a separate entity, it would not appear to possess qualities for inclusion on the National Register of Historic Places.

14C0526

Description:

Lithic material was found eroding out of the edge of a bench immediately to the southwest of Grouse Creek in an area of 175 x 125 meters. The material collected was found in dense clusters approximately 20-30 meters across that may represent houses or activity areas. Some material was found away from the edge of the bench at the west boundary of the site. Cultural material in this area appeared to be exposed by a recent meander scar, part of the same meander that cut through 14C0320, 14C0516, 14C0566.

Surface Collection:

Eleven clusters of lithic artifacts and debitage were mapped in the field and all material was bagged accordingly: one Langtry point, 2 Gary point basal fragments and one preform, a point and a midsection; three small U-shaped biface fragments that could represent either the hafted portions of Gary points or small discoidal biface fragments; two large end scrapers, a large discoidal scraper, and several side scrapers; a large number of crude biface fragments;

several fragments of sandstone with worn surfaces; numerous modified and utilized flakes, chert cores and waste flakes; and several worn pebbles. No pottery was noted, but fragments of bone and shell were also collected (Fig. 8).

Interpretation:

Contracting stem points are the most common styles found on Cuesta Phase sites in southeastern Kansas (Marshall 1972; Rowilson 1977, 1980; Brogan 1980). The clustering of artifacts and cultural debris on this and adjacent sites in the lower Grouse Creek valley appears to represent a major Middle Woodland occupation--perhaps even a village--encompassing probable house sites, work areas, and possibly campsites. The many biface fragments and the coarse nature of the Gary point fragments could possibly be interpreted as the discards of a secondary lithic reduction center. The primary source for both the Wreford and Florence cherts found at these sites lies directly across Grouse Creek to the northeast.

Condition:

The site has been disturbed by plowing.

Project Impact:

The site will lie slightly above the flood pool level of Kaw Lake, but some erosion of the bench could occur during flooding.

Recommendation:

This site should be periodically revisited and recollected to increase its artifact collection (especially for pottery), enhance our knowledge of it, and to assess any possible erosional damage. Its large size, richness of cultural materials (including bone and shell), its apparent nuclear role in the larger Middle Woodland settlement of the lower Grouse Creek valley all would satisfy criteria for inclusion on the National Register of Historic Places.

14C0527

Description:

Flakes were found eroding out of the edge of a bench immediately to the west of Grouse Creek. The lithic scatter covered an area roughly 30 meters in diameter.

Surface Collection:

Retouched and utilized flakes, chert cores, and waste flakes.

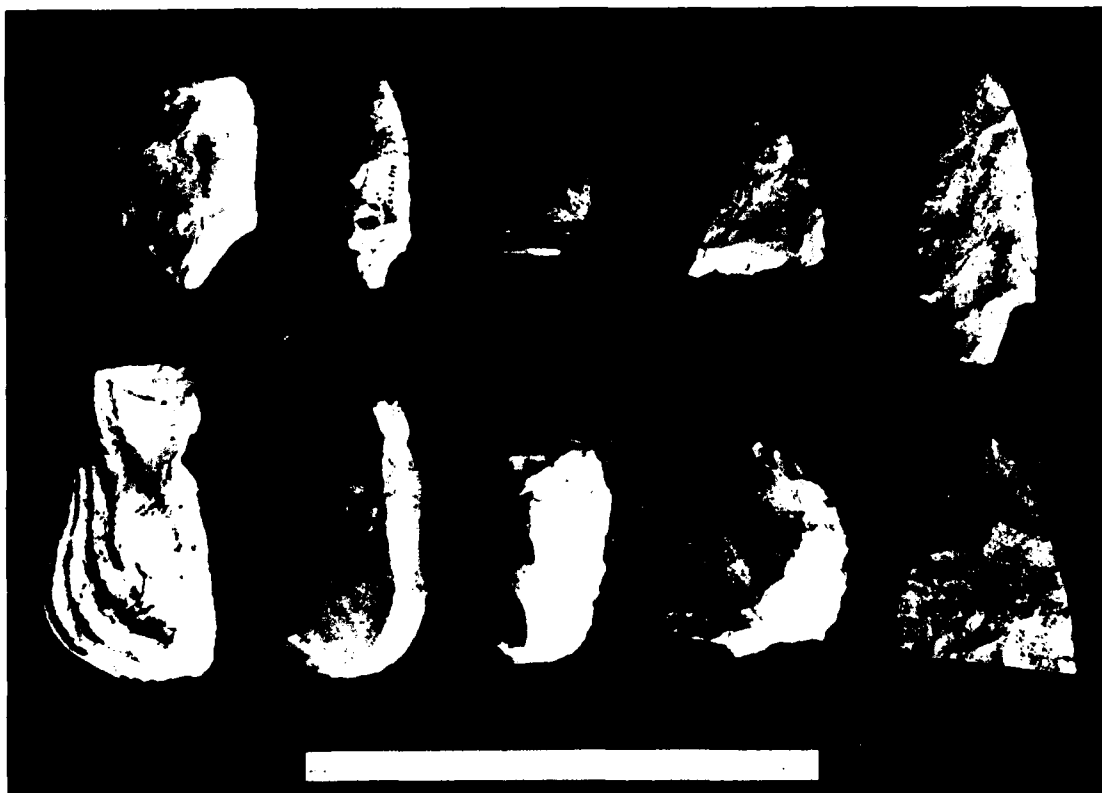


FIGURE 8. SITE 14C0526 ARTIFACTS

Interpretation:

No cultural affiliation can be given this site. It is located on the same bench and in the same field as other Middle Woodland sites, and it may be part of the general Middle Woodland occupation of the lower Grouse Creek valley.

Condition:

The site has been disturbed by plowing.

Project Impact:

The site lies above the elevation of Kaw Lake's maximum flood pool, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected against damage by the Kaw Lake. Our present sparse knowledge and cultural materials meet eligibility requirements for inclusion on the National Register of Historic Places.

14C0528

Description:

A small amount of lithic debris was found eroding out of the bench in an area of 30 x 30 meters on the west side of Grouse Creek. Scattered flakes and apparently very recent cattle bones were also found immediately at the base of the bench of the first bottom.

Surface Collection:

Complete and broken chert bifaces, retouched and utilized chert flakes, chert cores and waste flakes, and animal bone.

Interpretation:

Although very little cultural material was found at this site, its location close to a cluster of Middle Woodland sites suggests it may be part of a general Middle Woodland occupation of the lower Grouse Creek valley.

Condition:

The site has been disturbed by plowing.

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by it.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our current sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0529

Description:

A dense but well-defined lithic scatter was found eroding out of the edge of a bench to the west of Grouse Creek. The flakes were concentrated in an area 20 meters in diameter.

Surface Collection:

One point/knife midsection, one biface fragment, retouched and utilized flakes, 2 chert cores, and chert waste flakes.

Interpretation:

The density of the lithic debris at this site resembles the possible activity areas noted for 14C0526, which lies immediately to the north on the same bench. Site 14C0529 may be another lithic concentration associated with a general Middle Woodland occupation of the lower Grouse Creek valley.

Condition:

The site has been disturbed by plowing.

Project Impact:

The site could be eroded by high water levels in Kaw Lake since its elevation (approx. 1050') is only a few feet above the expected flood pool elevation of Kaw Lake.

Recommendation:

This site should be periodically revisited to recollect cultural materials to enhance our knowledge of it, and to monitor possible erosional damage from high flood water levels. Our present

sparse knowledge does not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0530

Description:

A sparse lithic scatter covering 40 x 40 meters was found on the level portion of a bench on the east bank of Grouse Creek. A concentration of fist-sized limestone occurred on the southern edge of the site, on the border between 14C0530 and 14C0531. These two sites were separated on the basis of lithic distributions on the ground surface.

Surface Collection:

Four chert biface fragments, retouched and utilized chert flakes, a chert core, chert waste flakes, one flake of obsidian, a very small thin smooth-surfaced sand-tempered pot sherd, and fragments of shell and a tooth.

Interpretation:

The stone artifacts and piece of obsidian (probable trade from New Mexico) found at this site are typical but not diagnostic of Middle Woodland and Late Woodland sites in this region. The pot sherd, however, is extremely small and does not fit well into any clearly defined typology for the region. If this site is associated with nearby 14C0532, a site that produced a medium-sized corner-notched point resembling the Scallorn type, this group of sites may represent a Late Woodland occupation.

Condition:

The site has been disturbed by plowing. It lies adjacent to a farmhouse compound that may cover a portion of the site.

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by it.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. The recovery of obsidian, pottery, and evidence for ecological data suggests this site contains potential information suitable for inclusion on the National Register of Historic Places.

14C0531

Description:

A loose lithic scatter was found in an area covering 75 x 50 meters on a level portion of a bench on the east bank of Grouse Creek. A limestone concentration was found between the southwest edge of the site and 14C0530.

Surface Collection:

One plano-convex end scraper, the tip of a small biface, another biface fragment, retouched and utilized flakes, a chert core, and unmodified chert flakes.

Interpretation:

The artifacts found at this site do not allow a definitive cultural affiliation to be assigned. The separation of 14C0530 and 14C0531 into two sites was based on the distribution of cultural material on the ground surface. If the sites are associated, 14C0531 is probably a Late Woodland campsite.

Condition:

The site has been disturbed by plowing. It lies adjacent to a farmhouse compound that may cover a portion of the site.

Project Impact:

The site lies above the level of Kaw Lake's maximum flood pool, and it should not be adversely affected by it.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. Our present sparse knowledge does not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0532

Description:

The site is located on the top of a bench on the east bank of Grouse Creek. A dense lithic scatter was found in an area covering 120 x 100 meters. Fire-reddened limestone and sandstone fragments were found scattered over the site.

Surface Collection:

A corner-notched point--possibly a large variety of the Scallorn style, a point drill tip, 4 plano-convex end scrapers, a possible end scraper preform, 9 discoidal biface fragments, 2 lanceolate biface fragments/point preforms, retouched and utilized flakes, chert cores, and unmodified flakes. No pottery was observed.

Interpretation:

The corner-notched point, scrapers, and bifaces suggest a Woodland occupation. The corner-notched point is larger and thicker than the Scallorn points found at 14C0556, 14C0557, 14C0513, and 14C0515. The relationships of this generalized point style are poorly understood at the present time.

Condition:

The site has been disturbed by plowing. In addition, the drilling of a well in the center of the site has undoubtedly displaced cultural material. This may account for the very dense concentration of lithic material in a small area away from the bench line where erosion would be most likely to expose cultural material.

Project Impact:

The site lies roughly at the elevation of Kaw Lake's maximum flood pool, and it could be damaged by wave action during high water stages.

Recommendation:

This site should be tested to determine the depth of its deposit and to ascertain the likelihood of the presence of subsurface features. Although present information is skimpy, this site may contain potentially significant data about the Late Woodland stage of upper Kaw Lake and it should be included on the Register of Historic Kansas Places.

14C0533

Description:

The site is located in a field of winter wheat on the east side of Grouse Creek, on a toe of land that rises to the base of a bluff. The site consists of a lithic scatter that appears to be washing downslope or out of the bench, and that covers an area of

approximately 50 x 25 meters. Since material was found in a disturbed road area beyond the wheat field, the site would appear to extend into the trees towards the bluff.

Surface Collection:

A large, ovate scraper and a lanceolate biface/point fragment were collected along with chert waste flakes. No diagnostic artifacts were found.

Interpretation:

The artifacts found at this site do not allow any definite cultural affiliation to be assigned to it. However, if this site is associated with nearby Site 14C0532--where a corner-notched point resembling the Scallorn type was found--it may represent a Late Plains Woodland or even an early Plains Village occupation. The artifacts present suggest a campsite.

Condition:

The site has been disturbed by plowing. A portion of the site probably extends into the trees along the base of the bluff. A road cut further up the slope may have damaged some of the site, since materials were found in the disturbed area of the road.

Project Impact:

This site lies just at the projected flood pool level of Kaw Lake, and could be damaged by wave action at times of high water.

Recommendation:

This site should be periodically recollected to increase its artifact collection, to enhance our knowledge of it, and to monitor possible erosional damage from the flood pool. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0534

Description:

The site consists of a fairly dense lithic scatter measuring approximately 75 x 50 meters eroding out of a bench on the east bank of Grouse Creek. The site was in winter wheat at the time of survey. One informant said that most of the material he has seen in the field has come from the vicinity of the site.

Surface Collection:

A plano-convex end scraper, a biface/scraper (?), a small end scraper, and a large flaked limestone block were collected, along with numerous utilized and unmodified chert flakes.

Interpretation:

Since no diagnostic artifacts were found at this site, no definite cultural affiliation may be assigned. Site 14C0532, 150 meters to the east, produced a medium-sized corner-notched point resembling the Scallorn type. This would indicate a probable Late Plains Woodland occupation for 14C0532. If Site 14C0534 is associated with that site, it may also be affiliated with the Late Woodland. The collected materials suggest that this was a campsite.

Condition:

The site has been disturbed by plowing.

Project Impact:

The site will be covered with water when Kaw Lake's flood pool is full, and so could be damaged by wave action.

Recommendation:

This site should be periodically recollected to increase its artifact collection, to enhance our knowledge of it, and to monitor possible erosional damage from the flood pool. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0535

Description:

A sparse lithic scatter measuring 30 x 30 meters eroding out of a bench on the east bank of Grouse Creek. At the time of survey, the area was in winter wheat.

Surface Collection:

All of the material was flagged, and then collected in one pick-up unit. Collected materials include the midsection of a biface, the midsection of a small triangular point, and a fragment of a discoidal biface.

Interpretation:

A definite cultural affiliation cannot be assigned to this site on the basis of the artifacts found. If this site is associated with nearby Site 14C0532 where a point resembling the Scallorn type was found, it may represent a Late Plains Woodland occupation.

Condition:

The site has been disturbed by plowing.

Project Impact:

The site lies below the projected flood pool elevation of Kaw Lake, and so could suffer erosion from wave action.

Recommendation:

This site should be periodically recollected to increase its artifact collection, to enhance our knowledge of it, and to monitor possible erosional damage from the flood pool. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0536

(ADJACENT TO FEDERAL LAND)

Description:

A very loose, widespread lithic scatter covering an area of about 40 x 50 meters. The site lies atop a loess bluff on the west (south?) side of the Arkansas River. The eastern edge of the site lies on the uppermost of a series of man-made terraces, and material is washing downslope. At the time of the survey, the land was planted in winter wheat.

Surface Collection:

Materials were collected in one unit. Collected materials consist of chert flakes, utilized flakes, and a crude scraper or biface blank (?).

Interpretation:

While the lack of artifacts in the surface collection at this site prevents the determination of any cultural affiliation, two nearby sites produced Scallorn points, indicative of a Late Woodland

occupation: 14C0513 lies about 450 meters to the north along the bluff line; and 14C0515 lies on the lowest terrace, about 300 meters northeast of 14C0536. Site 14C0515 lies downslope from 14C0512 (which lies on the bluff top and slope), and its Scallorn point may have been washed down from this site. If Site 14C0536 is associated with these sites, it may also be Late Woodland, but further collecting would be needed to confirm this. The collected materials suggest that this was either a lithic reduction site or a camp.

Condition:

The site has been disturbed by plowing, and its eastern portion may have been destroyed when the slope was terraced.

Project Impact:

The site lies well above Kaw Lake's maximum flood pool level, and it should not be adversely affected by the lake.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0537

(ADJACENT TO FEDERAL LAND)

Description:

The site lies on the southwest side of the Arkansas River, extending from the edge of a loess bluff downslope across man-made terraces. The ground has been plowed and was in winter wheat at the time of survey. The site consists of lithic debris and some chunks of limestone washing from the top of the bluff downhill about 100 meters. The lithics are concentrated in a basin formed by the second terrace from the top (pick-up unit "B").

Surface Collection:

Materials were collected in four pick-up units ("A", "B", "C", and "D") that correspond to the man-made terraces. A fragment of a discoidal biface was found in "B", and "C" produced the base and midsection of a stemmed point with a slightly flaring convex base. Chert flakes, utilized and unmodified, were also found.

Interpretation:

The stemmed-point fragment is probably of Plains Woodland origin. Scallorn points were found nearby at Sites 14C0515 and 513, indicating Plains Woodland occupations. Thus, Site 14C0537 may be part of a group of Plains Woodland sites along the south side of the Arkansas River.

Condition:

The site has been disturbed by plowing. Man-made terracing has also affected the site, and may have left little, if any, cultural material in situ.

Project Impact:

The site lies well above the maximum flood pool elevation of Kaw Lake, and should not be adversely affected by it.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0538

(ADJACENT TO FEDERAL LAND)

Description:

The site consists of a lithic scatter and chunks of limestone in an area of approximately 30 by 30 meters. It lies in a plowed field in winter wheat at the top of a loess bluff on the south side of the Arkansas River. It occupies in two loci: one just south of Bossi farm sheds, and the other in an orchard about 15 meters to the northeast. This site may be a continuation of 14C0512, which lies just north of the county road (about 30 meters to the north).

Surface Collection:

Materials were bagged in two pick-up units (one for the orchard locus, the other for the wheat field south of the farm sheds). Collected materials include chert flakes, the midsection of a large point, and a modified flake/graver.

Interpretation:

Because of its nearness to 14C0512, this site probably represents a continuation of it; the intervening portion may have been destroyed or obscured by a farm and a county road. A small Scallorn point was found at 14C0515, directly downhill from 14C0512, and may have washed down from it. Another Scallorn point was collected at 14C0513, to the north on the same bluff. Both 14C0512 and 14C0538 are probably Late Woodland sites, although the artifacts collected from them do not allow any definite cultural affiliation to be made. The abundance of shatter, flakes, and utilized flakes suggest that this site was a camp and/or lithic reduction center.

Condition:

The site has been disturbed by plowing and by construction of a farmhouse and outbuildings.

Project Impact:

The site lies well above the maximum flood pool level of Kaw Lake and should not be adversely affected by it.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0539

Description:

A lithic scatter eroding out of a low bench immediately above the floodplain, on the south side of the Arkansas River. There is historic debris immediately to the northwest along the south side of the county road. The site covers an area of about 30 x 30 meters in a plowed field of winter wheat.

Surface Collection:

Decortication, thinning, and utilized flakes were collected, along with a small, somewhat triangular point from which the barbs and base were missing. It was probably corner notched. The materials were collected in one pick-up unit.

Interpretation:

A Scallorn point was found about 50 meters northwest in Site 14C0515. If Site 14C0539 is associated with this site, it may belong to the Late Woodland period. The materials collected suggest either a chipping center or a camp. The nearby historic debris apparently represents a relatively recent trash dumping of no historical significance.

Condition:

The site has been disturbed by plowing.

Project Impact:

It lies just at the flood pool level of Kaw Lake and could be eroded by wave action.

Recommendation

This site should be periodically recollected to increase its artifact collection, to enhance our knowledge of it, and to monitor possible erosional damage from the flood pool. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0540

Description:

The site consists of many small flakes eroding out of a gully at the base of a pasture. The gully is eroding onto the slope of a bluff on the south side of the Arkansas River. Flakes were found at the base of the gully in an apparent road cut, and in a deep erosional cut in the loess. The site's extent is unknown--it may extend upslope and be hidden under the grass cover of the pasture.

Surface Collection:

Small flakes, some utilized, and four (4) biface fragments, one with parallel sides and the remaining end rounded. The materials were collected in one pick-up unit.

Interpretation:

This site is only 50 meters north of 14C0513, which produced a small Scallorn point. If the two sites are associated, then this site would represent a Late Woodland occupation. However, no diagnostic artifacts were found.

Condition:

The site has been at least partially damaged by erosion, but some of it may still lie intact in the pasture upslope.

Project Impact:

It lies well above Kaw Lake's maximum flood pool, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0541

(ADJACENT TO FEDERAL LAND)

Description:

The site is located on top of a loess bluff on the south side of the Arkansas River. It appears as a loose lithic scatter around the foundation of a farmhouse, in a garden plot, and in a plowed field to the south of the house. Some chunks of limestone (possibly not part of the site) are in the field to the southeast. The site covers an area of 30 x 30 meters.

Surface Collection:

Collected artifacts include utilized flakes, a smoothed rectangular chunk of limestone, a quartzite biface, a retouched biface of Kay County Chert, a modified flake/graver, a possible graver, a large chunk of quartz, and a Calf Creek point from which the stem, one tang, and the tip were missing. The point and the quartz chunk were found on the surface near the house, and may have been exposed during its construction. Many small flakes were also found. The materials were collected in one pick-up unit.

Interpretation:

The presence of a Calf Creek point suggests that this site had an Archaic occupation. No other diagnostic artifacts were found, so if there were other occupations, they cannot yet be determined. The nature of the artifacts suggest a camp.

Condition:

The site has been disturbed by plowing and by house construction.

Project Impact:

The site lies above the level of Kaw Lake's maximum flood pool, and should not be adversely affected by it.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Its apparent Archaic cultural affiliation--rare in Kansas, its uncommon site situation, and the relatively preservable condition would meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0542

Description:

The site is located on a low bench immediately above the floodplain of the Arkansas River, on its south side. It lies in a plowed field and consists of a scatter of lithics, limestone and sandstone chunks, as well as historic glass and pottery. It covers an area of about 50 x 50 meters.

Surface Collection:

Materials were collected in one pick-up unit. Artifacts collected were the tip of a knife or point, fragments of three bifaces, a bifacially utilized flake, a utilized flake or graver, other utilized flakes, and unmodified flakes and debitage. The tenant who farms the land has a double-beveled knife from this site.

Interpretation:

Although the artifacts and debitage found here suggest that this site represents some sort of camp, no diagnostic artifacts were found, and no definite cultural association may be assigned. The beveled knife is characteristic of Plains village cultural groups.

Condition:

The site has been disturbed by plowing. It will not be within the limits of Kaw Lake's flood pool.

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0543

Description:

Lithic scatter and limestone chunks have been exposed by tilling and terracing on the top of a loess bluff on the south side of the Arkansas River. The site covers an area of 35 x 50 meters.

Surface Collection:

Materials were bagged in one pick-up unit. Collected artifacts consist of a fragment of a large chert biface, a large chert core, a small chert point (possibly Fresno?) missing the tip, 2 chert biface fragments, a chert biface fragment (possibly stemmed), several retouched and/or utilized flakes, and unmodified chert flakes. Historic materials were found, including ceramics, glass, and metal items.

Interpretation:

Since no clearly diagnostic artifacts were found, it is impossible to determine this site's cultural affiliation, and more collecting or testing would be needed to do so. The abundance of bifaces and flakes suggest this was a camp. The historic refuse probably represents a historic Euro-american occupation atop the remains of either a Woodland or Plains village (Fresno points) pre-historic component. There is no evidence of even foundations for a historic structure, if one ever stood here.

Condition:

The site has been disturbed by plowing, and terracing in the slope of the bluff has probably disturbed part or all of the area.

Project Impact:

The site lies well above the expected upper elevation of Kaw Lake's maximum flood pool, and it should not be adversely affected

by the lake.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places. The Euro-american component is too small and too poorly preserved to warrant any recognition of historic significance.

14C0544

(ADJACENT TO FEDERAL LAND)

Description:

A lithic scatter with limestone chunks. The site lies in a plowed field on a bench above the floodplain on the west side of the Walnut River. Flakes are eroding out of the bench on the north-eastern toe of the site, and extend to the south (the southern boundary of the site could not be determined). A pottery sherd and a dart point were found about 90 meters and 25 meters west, respectively, of the lithic concentration.

Surface Collection:

The surface collection was made in one pick-up unit, and only sherds and tools were collected. Five small pottery sherds were found. Four are shell tempered and are probably Cowley Plain (a Great Bend ware), while the fifth is sand tempered, and is possibly Great Bend as well. Also collected were a small corner-notched point of greyish chert, a large blank of tan banded chert, a limestone biface fragment, a small biface fragment, and a utilized flake (the latter two probably of heat-treated Kay County Chert).

Interpretation:

The presence of pottery suggests that this site was at least a semi-permanent camp. The Cowley Plain sherds indicate a Great Bend occupation. TECHRAD recorded a Great Bend site immediately north of the ditch that runs just north of Site 14C0544 (no number had been assigned to it at the time of survey). Since both sites are of the same vintage, they are probably related and may once have been a single site.

Condition:

The site has been disturbed by plowing, and possibly by the construction of farm buildings just to the southwest.

Project Impact:

This site lies just above the level of Kaw Lake's maximum flood pool, and should not be adversely affected by it.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. As an apparent part of the very extensive Great Bend settlement on the lower Walnut River, this site should at least be accorded protection on the Register of Historic Kansas Places.

14C0545

Description:

The site lies on a sandy bank on the south side of the Arkansas River in a plowed field of winter wheat. It consists of a loose scatter of flakes and pottery sherds, along with historic debris from a barn and a house (the house has been washed away by the river) (Fig. 9).

Surface Collection:

Materials were collected in two general pick-up units: "east" and "west". They include chert debitage, flakes, and utilized flakes, a Fresno point base, and four potsherds. Two of the sherds are shell tempered, and are probably Cowley Plain. The third sherd is not shell tempered and is cord roughened, while the fourth is smoothed over cord roughened. These latter two are most likely Woodland sherds.

Interpretation:

Although few tools were found, the presence of pottery in this site suggests a camp. The Fresno point and the shell-tempered Cowley Plain sherds indicate a Great Bend occupation. The cord-roughened sherds suggest an earlier occupation as well, probably Woodland.

Condition:

The site has been disturbed by plowing.

Project Impact:

Site 14C0545 lies at an elevation of approximately 1060-1063 feet above mean sea level and above the expected maximum flood pool elevation of Kaw Lake. It should not be adversely affected by the lake.



FIGURE 9. SITE 14C0545

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. The uncommon prospect of two components at this site makes it desirable for inclusion on the Register of Historic Kansas Places.

14C0546

(ADJACENT TO FEDERAL LAND)

Description:

The site is located on the first terrace above the floodplain on the south side of the Arkansas River. It runs east and west along the terrace and south on to the high point of the terrace. The site appears as a dense lithic scatter, pottery, limestone, and sandstone. The site may extend southward into an area not surveyed. To the north, on the floodplain, only one flake was found. The site covers an area of approximately 150 x 100 meters.

Surface Collection:

All material was flagged, then collected in seven pick-up units (A through G). Each of the units produced a number of flakes. Units B, C, and D had the densest lithic concentration (almost 200 flakes were collected there), while units F and G had some retouched flakes. Larger flakes and cores were found at the top of the rise to the south of units B, C, and D (this could be an effect of differential erosion or the washing down of artifacts). Unit E, located just to the north of the main east-west concentration (north of C), produced only a few flakes. However, the base of a Washita point was found in a garden plot in the north section of unit E, not far from the edge of the terrace. Two shell-tempered pottery sherds--probably Cowley Plain--were found in unit A, as were two biface fragments of Florence Chert. Unit B produced a sandstone mano and 2 large utilized flakes. Unit C produced a side scraper (modified flake), limestone, and a point tip, possibly a Fresno style. The base of a Fresno point, a hammerstone, a biface fragment, and a large scraper were collected from unit D. In unit F were found a smoothed fragment of sandstone, a large discoidal end scraper, a drill fragment, and a modified flake. Unit G produced a modified flake fragment and a Great Bend sherd. Many of the artifacts, especially flakes, were of Florence Chert, and much of this had been heat treated.

Interpretation:

The potsherds found along with the Washita and Fresno points, indicate a Great Bend occupation. The pottery, the mano, and the large number of tools suggest at least a fairly permanent camp, while the large number of flakes (especially in units B, C, and D) suggest one or more areas of lithic reduction, or they could mark house locations.

Condition:

The site has been disturbed by plowing and possibly by the construction of buildings on the adjacent farm.

Project Impact:

The site lies well above the maximum flood pool level of Kaw Lake, and should not be damaged by it.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Its Great Bend cultural affiliation, and relatively rich artifact yield merit inclusion on the Register of Historic Kansas Places.

14C0547

Description:

Flakes, lithic scatter, and fire-reddened sandstone were found on the first terrace above the floodplain, on the south side of the Arkansas River. The western portion of the site lies on an artificial terrace, planted in wheat at the time of survey, while the eastern portion was disked and fallow. The site covers an area of approximately 50 x 30 meters.

Surface Collection:

Materials were collected in two pick-up units (east and west). A plano-convex end scraper, the midsection of a point or knife, the rounded end of a large biface of heat-treated chert, and a corner-notched point (minus tip) that resembles the Scallorn type were found in the western portion of the site. Many flakes were found in both sections of the site. Many were large and had large sections of cortex still on them.

Interpretation:

The large flakes and decortication flakes indicate even more areas of tool preparation, while the fire-reddened sandstone would suggest hearths from a camp. If the corner-notched point is a Scal-lorn, then this site could be Late Woodland. However, no other diagnostic artifacts were found.

Condition:

The site has been disturbed all over by plowing, and in its western portion by artificial terracing. The site's elevation is about 1065 feet, well above Kaw Lake's flood pool.

Project Impact:

This site lies at an elevation of about 1065 feet above mean sea level, well above Kaw Lake's maximum flood pool, and it should not be adversely affected by the lake.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0548

Description:

The site is located in a cultivated field on an artificial terrace above the Arkansas River floodplain. It consists of a sparse lithic scatter, with large chunks of chert and river cobbles found eroding downslope. It covers an area of 20 x 20 meters.

Surface Collection:

Materials were collected in one pick-up unit. They consist of river cobbles, chert chunks, and only four chert flakes.

Interpretation

Because of the lack of diagnostic artifacts, no cultural affiliation can be made. The lack of tools suggests a very briefly occupied camp or chipping station.

Condition:

The site has been disturbed by plowing and the construction of terraces.

Project Impact:

The site lies well above the level of Kaw Lake's maximum flood pool, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0549

(ADJACENT TO FEDERAL LAND)

Description:

The site lies on the second terrace, on top of a rise, on the south side of the Arkansas River. Lithic debris appears to be eroding downslope to the east, south, and west from a rise at the center of the site. The densest concentration of material is in pick-up unit "W". The site covers an area of 50 x 50 meters.

Surface Collection:

Material was collected in three pick-up units: west, northwest, and east. A small point tip was found in the east unit, and a crude biface was collected from the west unit. Utilized flakes and debitage came from all three units.

Interpretation:

The lack of any diagnostic artifacts precludes assignment of cultural affiliation. The materials collected suggest that this site was a small camp.

Condition:

The site has been disturbed by plowing.

Project Impact:

It lies well above the maximum flood pool level of Kaw Reservoir, and should not be adversely affected by it.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0550

(ADJACENT TO FEDERAL LAND)

Description:

The site is located on a bluff top on the east side of Grouse Creek, just north of its confluence with the Arkansas River. Lithic debris was found eroding into a gully that has cut into the bluff (unit "A"). Other material was found around tree roots on the bluff top (units "B" and "C"). Material may be washing down from higher up the bluff, but this area was covered with grass and was not shovel tested. The site covers an area of approximately 50 x 25 meters.

Surface Collection:

Materials were collected in three pick-up units (A, B, and C). A fragment of a scraper (made of heat-treated banded Florence Chert) was collected in unit B. Flakes were found in all units, especially in unit A, where they were exposed in a gully.

Interpretation:

Since no diagnostic artifacts were found, no cultural affiliation may be assigned.

Condition:

The site has been partially disturbed through a gully's erosion, but may extend further uphill where the ground surface is obscured by grass cover.

Project Impact:

The site lies above the predicted maximum flood pool level of Kaw Lake, and should not be adversely affected by it.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0551

(ADJACENT TO FEDERAL LAND)

Description:

A small lithic scatter found in a zone of sparse vegetation, on top of a limestone bluff, and just above the uppermost limestone outcrop on the east side of Grouse Creek. The exact extent of the site was hard to determine because of grass cover. It may extend farther uphill. The site lies just north of a small intermittent tributary that flows into Grouse Creek from the east. It covers an area of at least 20 x 20 meters.

Surface Collection:

Materials were collected in one pick-up unit. They consist of two utilized flakes of Florence Chert and a handful of flakes, some with cortex.

Interpretation:

Since no diagnostic artifacts were discovered, it is impossible to affix any cultural affiliation to this site. The lack of any tools besides utilized flakes suggests that this was a chipping station or small camp.

Condition:

The site is in grass. It is not known whether it has been disturbed by plowing.

Project Impact:

The site lies well above the maximum flood pool elevation of Kaw Lake, and should not be adversely affected by it.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0552

(ADJACENT TO FEDERAL LAND)

Description:

The site is situated atop a bluff in grass close to the limestone ledge, on the east side of Grouse Creek at its confluence with the Arkansas River. Flakes were found in three vegetation anomalies, labeled A, B, and C. These anomalies were depressions of sparser patches of a different colored grass. Flakes were more concentrated along the edges of these clearings. Unit A was an oval 3.5 x 4 meters. A sandstone or gritty limestone concentration was protruding from the surface in the southwest part of this oval. The concentration was probed: no charcoal was found, but limestone and sandstone were present in the center of the ring, beneath the surface. Probes were taken at 50 cm. intervals across the northwest-southeast axis of unit A. Outside the anomaly, the dark brown topsoil was replaced by red subsoil at 18-22 cm. below ground surface. Within the anomaly, this soil change occurred at 12-16 cm. below ground surface. No evidence of charcoal or a dark cultural layer was found. Anomaly B measured 4.5 x 5.5 meters, and C measured 4 x 5 meters. Unit B was 15 meters southwest of A, while C was 7.5 meters to the northwest of A.

Surface Collection:

Materials were collected in three pick-up units (A, B, and C) corresponding with the three anomalies. A small triangular corner-notched point with a concave base was found in unit B. Flakes were found in all three anomalies.

Interpretation:

The collected materials suggest either a lithic reduction center or a camp. The three depressions pose a special problem. Their size and shape suggest house depressions, and the site is ideally situated on the bluff top for a summer camp. However, no charcoal, daub, or dark cultural deposit was found in the probes, and the flake concentrations in the anomalies could be due to better surface visibility through the sparser grass cover. So, a natural cause cannot be ruled out without further testing. This site is just upslope from 14C0556 and 14C0557, two very productive sites, and could have some relation with them, as well as with sites along the same bluff top (14C0554, 14C0551, 14C0550, 14C0553). Since no diagnostic artifacts were found, no cultural affiliation may be assigned.

Condition:

The site is in grass and presumably has never been plowed.

Project Impact:

The site lies well above the maximum flood pool elevation of Kaw Lake, and should not be adversely affected by it.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0553

(ADJACENT TO FEDERAL LAND)

Description:

The site lies on a bluff top on the east bank of Grouse Creek, just above its confluence with the Arkansas River. The site is in grass and has never been plowed. A few flakes were found in two vegetation anomalies on the bluff top. The anomalies are circular areas approximately 6 to 7 meters in diameter, and had a low sparse grass cover.

Surface Collection:

Materials were collected in two pick-up units (A and B) corresponding to the two anomalies. A few chert flakes came from each anomaly; some were collected from the edge of the bluff, 10 meters to the north.

Interpretation:

Three similar anomalies were discovered at 14C0552. There, probes of one of them revealed a soil change (from dark topsoil to red subsoil) 6 cm. higher than outside the anomaly, but no charcoal or dark cultural layer was discovered. It is possible that these are house depressions, but they may as easily have a natural cause. The sparse low vegetation of the anomalies may simply make finding flakes easier, while the actual site extends (under grass cover) over a much larger area. These anomalies could be caused by cattle or could be natural sink holes (the bluffs are of limestone). Testing is needed to determine whether these are natural or not. Since no diagnostic artifacts were found, no cultural affiliation may be assigned.

Condition:

This site has never been plowed.

Project Impact:

The site lies well above the maximum flood pool elevation of Kaw land, and should not be adversely affected by it.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0554

(ADJACENT TO FEDERAL LAND)

Description:

The site lies on a limestone ledge above an intermittent tributary of Grouse Creek, below the uppermost limestone outcrop that forms the bluff top. This ledge is above the tributary's first terrace. Sparse flakes were found on the ledge in an area of about 10 x 10 meters.

Surface Collection:

Materials were collected in one pick-up unit, and consisted of a few chert flakes and a large chunk of limestone veined with chert (probably of natural origin).

Testing:

The ledge was shovel tested, but no material was found below the surface.

Interpretation:

No diagnostic artifacts were found, so no definite cultural affiliation can be assigned. The flakes collected may be wash from higher upslope.

Condition:

The site is in grass and trees, with rock scatter from the upper outcrop. It has not been plowed.

Project Impact:

The site lies well above the maximum flood pool elevation of Kaw Lake, and should not be adversely affected by it.

Significance:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0555

Description:

The site lies on the first terrace of Grouse Creek, just above its confluence with an intermittent tributary. It is covered with trees and low shrubs, but a few flakes were eroding out of a cow path among the trees. The site has an approximate area of 20 x 20 meters, and probably extends further, although obscured by vegetation.

Surface Collection:

A handful of flakes were found, all collected in a single pick-up unit.

Interpretation:

This site cannot be identified with any one culture, since no diagnostic artifacts were found.

Condition:

The site is forested, and has not been plowed.

Project Impact:

This site lies 10 feet above the maximum flood pool level of Kaw Reservoir, and it should not be adversely affected by the lake unless floodwaters erode the terrace it lies upon.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0556

Description:

This site lies on the second terrace above the east bank of Grouse Creek and on the rocky talus slope beneath a limestone bluff. Surface finds, probably washed from above, were found on the first terrace above the bottomland. Site 14C0556 is separated on the north from 14C0557 by a spring and brook flowing through a ravine from the base of the bluff to Grouse Creek. The exact location of the site was determined by a semi-gridded set of 12 shovel tests. The site covers an area of approximately 50 meters (N-S) by 30 meters (E-W) (Fig. 10).

Surface Collection:

Surface finds were made along deer trails on the first terrace, downslope from the site proper, and along the banks of the ravine separating the site from 14C0557. They consisted of waste chert flakes and utilized flakes.

Testing:

Twelve shovel tests were made on the second terrace, upslope from the surface finds. They were arranged roughly in a grid (Fig. 10) and dug to a depth of about 10 cm. All of the shovel tests produced chert flakes. Also found was a large thick biface of greenish-grey quartzite (possibly a celt), the midsection of a thin well-made biface, the convex flaring base of a very large (8 cm. across) biface, an end scraper, and a nearly complete point. The latter is $3\frac{1}{2}$ cm. wide at its widest point, and is about 6 cm. long. It is stemmed with an expanding convex base, no barbs, and slightly convex blade sides. It resembles a Williams point, and this identification would place it in either the Late Archaic or in the Woodland tradition.

Two test squares were laid out, each measuring 2 x 2 meters, and excavated in arbitrary 10 cm. levels. All fill from A was screened.

Test Square A

Test square A was placed on the west edge of a bench of talus rubble, on a spot where initial shovel testing had revealed a bone concentration immediately beneath the ground surface. The square was approximately 5 meters east of the terrace edge, and 6 meters south of the edge of the ravine.

From the surface to above 15 cm. below ground surface was a dark black soil, rich in cultural materials. This layer produced

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A SURVEY AND ASSESSMENT OF THE CULTURAL RESOURCES AT KAW LAKE, --ETC(U)

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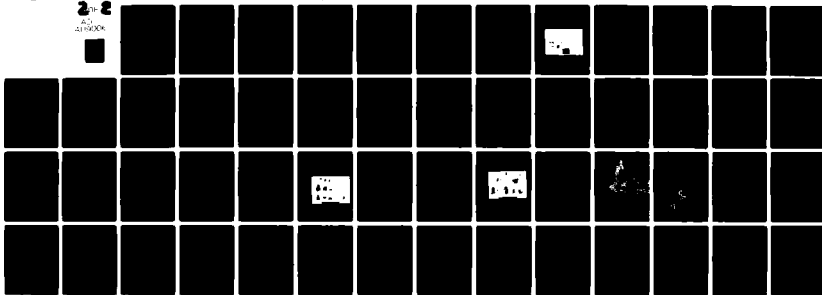
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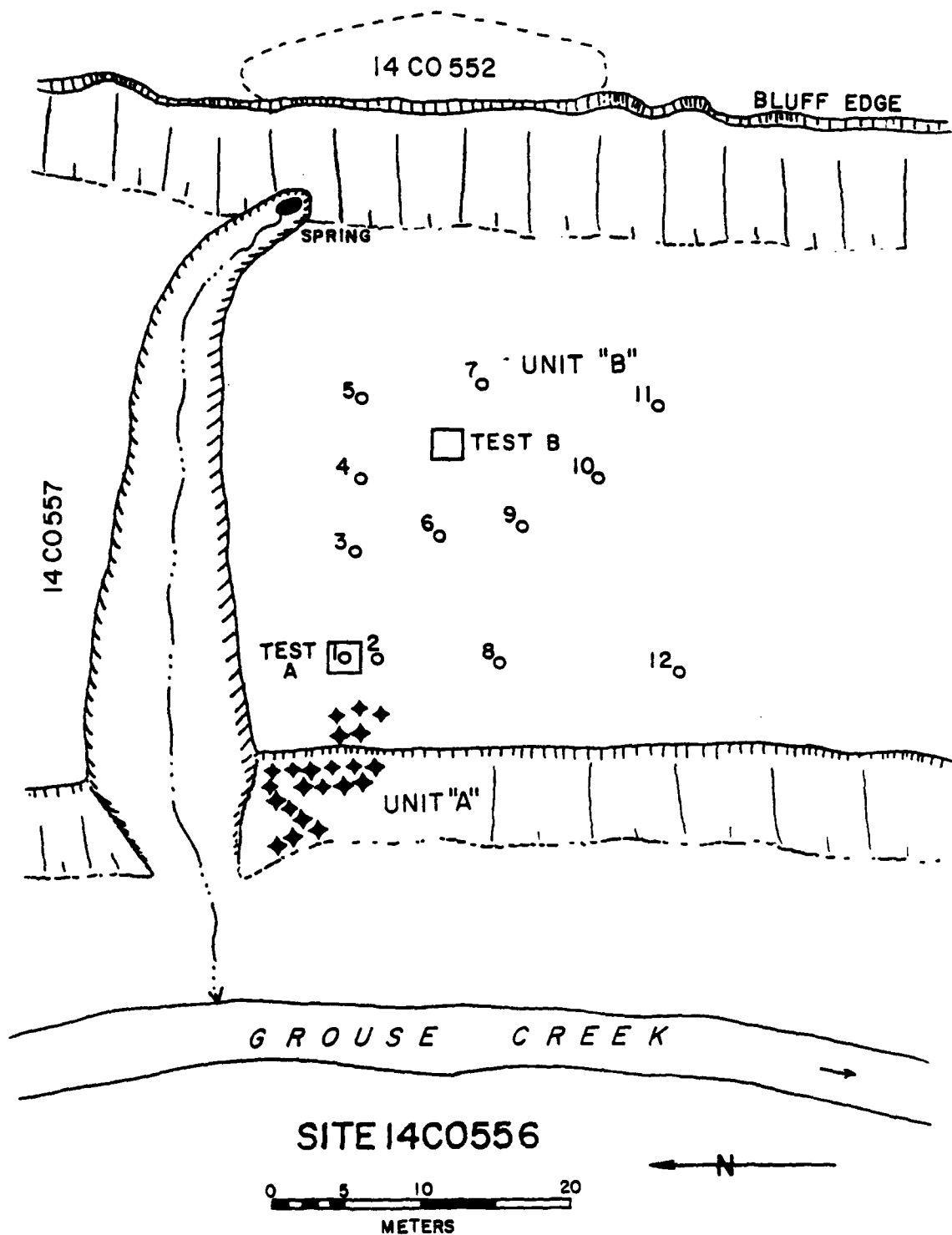
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○ SHOVEL TEST

◆ SURFACE FINDS

FIGURE 10. SITE 14C0556 SKETCH MAP

flakes, utilized flakes, scrapers, bifaces, sandstone, fire-reddened limestone, bone fragments, teeth, snail shells, a point tip, a small corner-notched point, and a cord-roughened sand-tempered sherd (resembling Riley Cord-roughened). From 15 to 30 cm. below ground surface was a layer of densely packed fist-sized limestone cobbles and smaller rubble. This level produced flakes, fire-reddened sandstone, bone, a chert core, and a small corner-notched point. Three varieties of snail shell were recovered from this level. Although cultural material was found throughout this level, it was densest in its upper 5 cm.

At 30 cm. the soil became sandy brown in color with a higher clay content, and was interspersed among large limestone boulders. This layer extended to at least 80 cm. deep, where the pit was discontinued. Several old rodent burrows filled with dark loamy soil ran through the upper 10 cm. of this level. Their fill contained flakes, a biface fragment, limestone, bone, and snail shells. The lighter brown soil below was less rich in cultural remains. Scattered flakes were found in it as deep as 70 cm., with one type of snail shell throughout.

Test Square B

Test square B was placed closer to the base of the bluff than test A--about 6 meters west of the edge of the talus slope.

The surface of B was covered with a scatter of chert flakes and small limestone fragments. From the surface to approximately 25 cm. below ground surface was a layer of dark soil permeated by numerous tree roots. This layer produced chert flakes, limestone cobbles with reddened areas, a biface fragment, a scraper, bone fragments, snail shells, hematite, and eight pottery sherds. Six sherds are cord roughened and sand tempered (resembling Riley Cord-roughened, a Smoky Hill ware). One other sherd probably fits in the same category, while another has possible punctations and is tempered with a mixture of sand and either crushed ceramic or crushed limestone.

At 25 cm. below ground surface the soil became sandier and limestone boulders began to appear. From 25 to 35 cm. there was also a scatter of limestone gravel in the soil. This lower soil layer continued at least as deep as 40 cm. below ground surface where excavation ceased because of the many large boulders. This layer produced flakes, a biface, bone, snail shells, a small triangular corner-notched point of heat-treated Kay County Chert, and one smooth-surfaced sand-tempered pottery sherd.

Interpretation:

Site 14C0556 appears to have three stratigraphic levels and two major cultural components. In both test squares, the uppermost

soil horizon is a dark loamy humus, rich in cultural remains. One of the two largely intact points from this level--small corner-notched, with straight base--is, unfortunately, not diagnostic. It does not resemble any known Woodland types, and cannot as yet be classified. The other, a large stemmed point resembling the Williams type, was found in the upper 10 cm. of the site and is diagnostic of either an Archaic or of a Woodland occupation. Since there are Woodland components below the surface layer, it is likely that this point represents a Woodland occupation. The ceramics from this level point to an additional component. None are clearly Woodland sherds. One is tempered with a mixture of sand and either crushed ceramics or crushed limestone and has possible punctations. The rest of the sherds are cord roughened and tempered with sand. They most closely resemble 2 pottery types: Riley Cord-roughened (a Smoky Hill ware), and the ceramics from the Bluff Creek Complex. The Bluff Creek Complex consists of a number of Middle Ceramic sites lying in the Bluff Creek drainage in Harper and southwestern Sumner County, Kansas (Gould 1973). While its ceramics use a variety of tempers, 67% are tempered with sand only, and virtually 100% of the sherds were cord roughened (*ibid.* pp. 52 and 54). Thus, the sherds from the upper level of 14C0556 possibly represent a Middle Ceramic component related to both the Smoky Hill Aspect and the Bluff Creek Complex, although the remainder of the recovered assemblage differs markedly from both and most closely resembles a Woodland complex. This component could be present at 14C0557 also, as a cord-roughened sand-tempered sherd was found in the upper soil level there.

The level of limestone cobbles found in Square A may be analogous to a similar stratum found in Square B of 14C0557, between 50 and 70 cm. below ground surface. Only a few cobbles at 14C0556 are fire reddened, however, so it is questionable whether the stratum is a midden produced by hearth cleaning. This stratum did not produce any diagnostic points or any ceramics.

The clayey, light brown soil that appeared between 25 and 30 cm. below ground surface is probably analogous to the level found at 14C0557 below 50 cm. The latter appeared to be a Woodland component. The stratum at 14C0556 produced a smooth sand-tempered sherd that could be Plains Woodland. The one projectile point (small corner-notched and triangular of heat-treated Kay County Chert) is not as yet assignable to any particular cultural complex. If this stratum is comparable to the underlying tan soil at 14C0557, it, too, is probably a Woodland component.

Site 14C0556 did not quite produce the volume of material found at 14C0557, but it is nevertheless a rich site. Between 2600 and 2700 waste flakes, many utilized flakes, several scrapers and bifaces, as well as bone, teeth, and shell were recovered from the two test pits. The variety and quantity of artifacts and materials

found suggest a range of activities, from tool manufacture to food preparation. This site may have served variously as a seasonal camp occupied repeatedly and/or as a year-round settlement. Further analysis of faunal remains may clarify this. Because of their proximity, Sites 14C0556 and 14C0557 are probably related, and could be a single site separated by the spring. They may also have associations with the cluster of sites on the nearby bluff top, although those have not produced diagnostic artifacts.

Site 14C0556 appears to have three components: a level of dark loam that has produced possible Middle Ceramic sherds and a probable Woodland artifact assemblage, a limestone midden as yet not identified culturally, and an underlying clayey soil that probably contains a definite Woodland component.

Condition:

Site 14C0556 is in excellent condition. It has never been plowed, and is presently covered with grass, brush, and trees. The site has not been heavily collected, and may even be unknown to local collectors. Some erosion of the site may have occurred along the terrace edge and on the bank of the ravine.

Project Impact:

The site lies above the projected maximum flood pool level of Kaw Lake, but it may receive damage along the steep eroding terrace face during high water levels.

Recommendation:

Because of the unusually great importance of this site, its very rare undisturbed condition, the rich concentration of cultural and ecological evidence, and its excellent potential for clarifying our almost non-existent knowledge of Woodland cultures in south central Kansas, this site should be tested by an east-west trench running from the terrace edge toward the bluff and talus slope. Such a trench excavated carefully and thoroughly would fully identify the value in the remainder of the site, which should then be preserved for a full-scale scientific investigation. All these factors satisfy eligibility criteria for inclusion on the National Register of Historic Places.

14C0557

Description:

Site 14C0557 lies on a flat loess remnant that forms the second

terrace above the east bank of Grouse Creek, just above its confluence with the Arkansas River. The eastern edge of the site is a talus slope at the base of a 30-foot high bluff of Barnestone limestone. A spring emerges from the base of the bluff and forms a tributary that flows directly west into Grouse Creek. The ravine through which it flows forms the southern boundary of the site, and separates it from 14C0556. The site covers an area of approximately 60 meters north to south by 30 meters east to west.

Surface Collection:

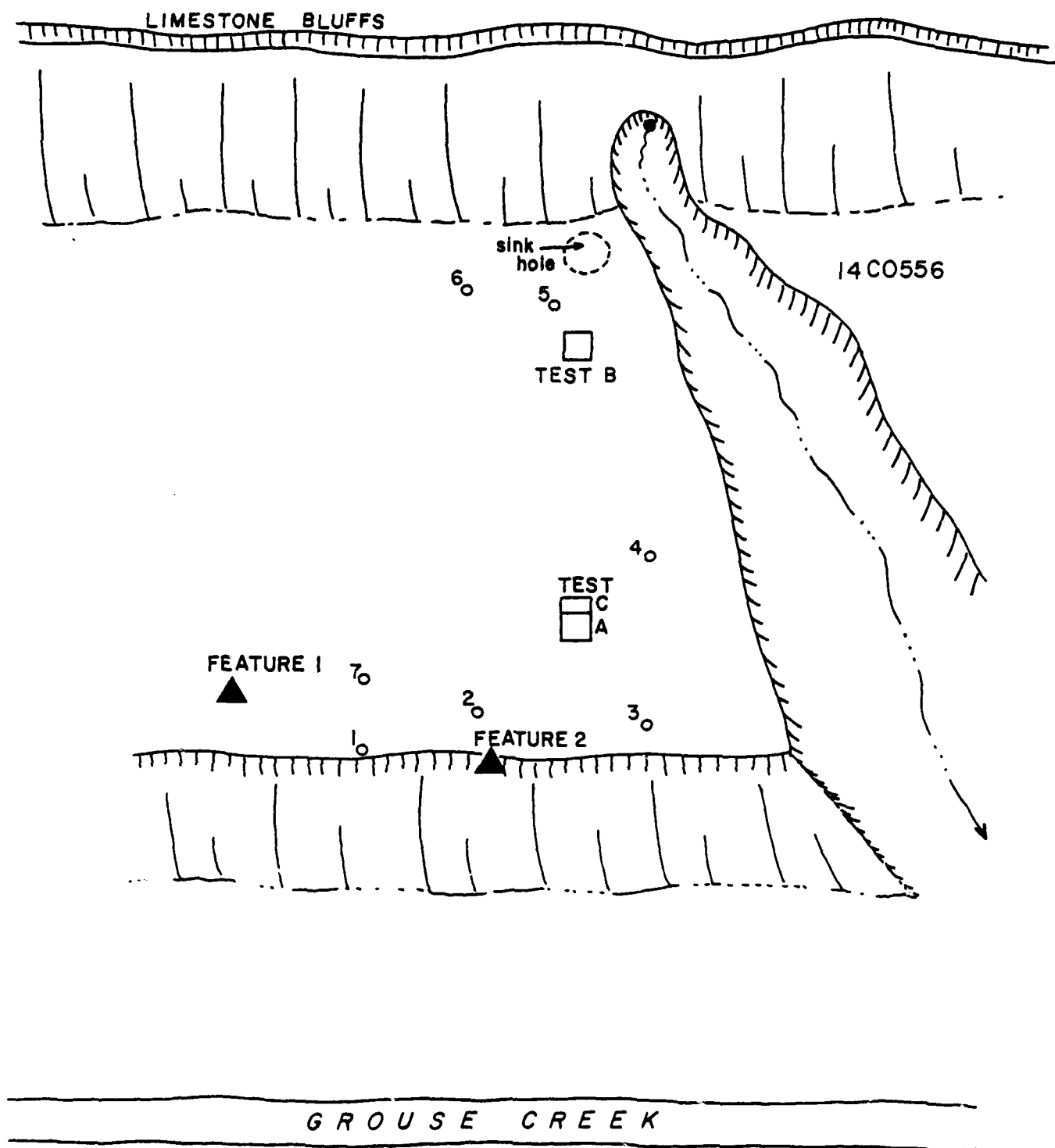
The surface collection was made in one pick-up unit. Flakes were found on the surface of the second terrace, in the talus rubble at the base of the bluff, and eroding out of a cut bank on the edge of the second terrace (e.g. feature 2). Aside from approximately 140 chert flakes, the surface yielded: a thin semi-rectangular and smooth slab of fire-reddened limestone (probably a grinding stone), the midsection of a large biface, a fragment of a crude biface, a thin oval scraper of banded chert (probably of Woodland origin), a fragment of a stemmed point and the midsection and base of a side-notched point (neither diagnostic), a fragment of a small point with one side notch and one corner notch (probably Late Woodland), and two fragments of small bifaces or blanks.

Two surface features were found. Feature 1 had charred ground in a depression resembling a hearth. A few flakes were found in it. This feature lay about 9 meters east of the edge of the second terrace and 33 meters north of the ravine (Fig. 11).

Feature 2 was an area of the cut bank at the edge of the second terrace where flakes and bone were eroding out. A section of the bank was scraped down, revealing flake concentrations at 25 cm., 40-45 cm., and 50 cm. below ground surface. A dark topsoil changed at 25 cm. to a mottled soil, then to a reddish soil at 50 cm. Flakes and bone were collected from the bank, including one bone fragment with several parallel butchering marks.

Testing:

Eight shovel tests were made in the second terrace (Fig. 11). Tests 1, 2, and 3 were made along the edge of the terrace, from north to south in that order. Test 4 was dug to the east of 3 and just north of the ravine. Tests 5 and 6 were made near the edge of the bluff's toe slope, while Test 7 was made about 5 meters east of Test 1 and 9 meters south of feature 1. Test 8 was placed approximately 15 meters north of feature 1. All of the tests produced flakes. Test 2 yielded a small corner-notched point (possibly Late Woodland). Test 4 produced the tang of a (corner-notched ?) projectile point. The tip of a small point came from test 8.



SITE 14C0557



○ SHOVEL TEST

FIGURE 11. SITE 14C0557 SKETCH MAP

Test Squares A and C

Test square A was placed on the second terrace. It measured 2 x 2 meters, and lay approximately 8 meters east of the terrace edge and 12 meters north of the edge of the ravine. Later, a 1 x 2 meter extension--designated square C--was made adjacent to the east side of A. As with the other squares, A and C were excavated in arbitrary 10 cm. levels. Square A was excavated to a depth of 100 cm. below ground surface and C to 110 cm. The upper 50 cm. of both squares consisted of a dense cultural level in dark silty loam. This level yielded an enormous quantity of cultural materials including waste chert flakes, utilized flakes, retouched flakes, an obsidian flake, a corner-notched point, two convex unnotched point bases, a small unnotched triangular point, a fragment of a side-notched point with a convex base, the midsection of a parallel-sided biface, chert cores, scrapers, a sandstone fragment, fire-reddened limestone, bone fragments, and a thin cord-marked and sand-tempered potsherd. At 50 cm. the soil changed to a lighter clayey brown where a concentration of reddened limestone, bone, flakes, charcoal, and shell became visible. It appeared to be a pit, and was designated feature 3. The pit's fill had a dark humic color, contrasting with the surrounding soil. The feature measured approximately 1 meter across, reached a depth of 90 cm. below ground surface, and was somewhat bell-shaped. The fill produced materials similar to those found in the upper 50 cm. of the square: chert flakes, reddened limestone, shell, bone, small corner-notched arrow points, a thick smoothed grit-tempered potsherd, a drill, and a possible antler fragment.

At approximately 65 cm. below ground surface, a thin cultural level of small flakes and burned limestone was found. Unreddened fragments of sandstone were scattered throughout the southeast corner of square C, from 40 to 79 cm. below ground surface.

Around 80 cm. below ground surface, a concentration of burned limestone could be seen and was designated feature 4 (Fig. 12). Apparently a hearth, feature 4 measured approximately 80 cm. in diameter and extended vertically to almost 95 cm. below ground surface. The overlying pit (feature 3) had disturbed one corner of feature 4, making it difficult to determine its relationship to the cultural level noted at 65 cm. The hearth produced waste chert flakes, utilized flakes, retouched flakes, bone fragments, and a thick plain-surfaced sand-tempered potsherd. A stemmed point with an expanding straight base (resembling a Scallorn) was found at 81 cm. deep just outside feature 4.

Two samples of charcoal for radiocarbon determinations were taken from feature 3: one from its top at the 40-50 cm. level, the other from 50-60 cm. below ground surface. The two samples were dated by the Center for Applied Isotope Studies in Athens, Georgia.



FIGURE 12. SITE 14C0557 TEST A, FEATURES 3 AND 4

The sample from the 40-50 cm. level yielded a date at 1115±70 B.P. (A.D. 835), while the second sample dated at 935±135 B.P. (A.D. 1015).

Test Square B

Test square B was placed approximately 8 meters west of the base of the talus rubble from the bluff, 18 meters directly east of square A, and 6 meters north of the edge of the ravine. Square B measured 1 x 2 meters and was excavated in arbitrary 10 cm. levels to a total depth of 110 cm.

A dense cultural layer in dark loamy soil extended to a depth of 50 cm. Flecks of burned earth were found at 8 cm. and between 16 and 20 cm. below ground surface. There were concentrations of flakes at 20 cm. and at 30 cm., with a relatively sterile level between 24 and 28 cm. There appeared to be another relatively sterile level between 45 and 48 cm. The loamy soil was rich in artifacts including pottery sherds, mano and metate fragments, drills, projectile points, scrapers, an obsidian flake, chert flakes, bone fragments, and snail shells. Fist-sized limestone cobbles--some fire reddened--were sparsely scattered throughout this soil horizon. Diagnostic artifacts from this level consist of a projectile point and 5 potsherds. The point is small and corner-notched, with a convex base, and appears to be a Woodland style. Two of the sherds are rimsherds--smooth surfaced, tempered with crushed limestone, and with a plain rim. The three body sherds are all cord marked; two have crushed limestone temper while the third is grit tempered. All of the sherds appear to be Woodland in style.

The second layer of soil appeared at 50 cm. below ground surface and extended to 70 cm. It exhibited a mottled tan appearance with a higher clay content than the loam, and it was tightly packed with limestone rubble, fire-reddened limestone, bone, shell, snail shells, stone artifacts and debitage, and either burned earth or decomposed limestone. There appeared to be a sterile level between 52 and 55 cm. below ground surface underlain by a concentration of cultural material at about 56 cm. The mottled soil horizon produced numerous flakes, a bone awl, scrapers, biface fragments, a projectile point fragment, and a potsherd. Two diagnostic artifacts were found: one corner of a large corner-notched Woodland point, and a cord-marked crushed limestone-tempered Woodland sherd.

At 70 cm. the base of the second stratum formed a clear discontinuity, as the soil beneath was a clayey tan and free of limestone rubble. It produced chert flakes, a scraper fragment, shell and bone fragments, two biface fragments, a point fragment, and a point tip.

From 70 to 100 cm. a zone of darker soil was visible in the

center of the square. It contained limestone, fire-reddened limestone, chert flakes, and bone. Around 100 cm. below ground surface this zone of darker soil contracted to a circular stain approximately 55 cm. in diameter. Designated feature 6, it was apparently a basin hearth and extended to 125 cm. below ground surface. The feature contained limestone, burned limestone, charred and uncharred bone, charcoal, numerous chert flakes, several biface fragments, two scrapers, a projectile point, snail shells, and shell fragments. The only diagnostic artifact was the point--medium sized, crudely shaped, and stemmed with a slightly flaring straight base. It resembles an Ellis point (Bell 1960: 32) and is probably Woodland.

Interpretation:

Site 14CO557 appears to represent one continuous major cultural occupation, although each test square revealed several stratigraphic soil divisions. The diagnostic materials found in the surface collection (a thin oval scraper and a small corner- and side-notched point) suggest a Woodland, especially a Late Woodland, occupation. The shovel tests also produced probably Late Woodland material--a small corner-notched point. Although later elements could be present, a Woodland occupation seems to extend to the surface of this site.

In all three test squares the uppermost soil stratum was a dark loamy soil extending to around 50 cm. depth and rich in cultural materials. In squares A and C cultural debris was distributed vertically in a fairly uniform manner, while possibly 3 major separate concentrations occurred in square B at ca. 20 cm., at 30 cm., and below 48 cm., all relatively sterile layers. These sterile layers could represent wash of soil from the bluff or wind-deposited loess. The relatively sparse scatter of limestone and fire-reddened limestone throughout the dark loam is probably debris from hearth cleaning.

The artifacts found in this level represent a variety of activities. Reddened limestone, pottery sherds, bone fragments, and mano and metate fragments indicate food preparation. Scrapers point to hide preparation, and a drill could represent a variety of activities. Crude bifaces, points and point fragments, unnotched point bases (possibly blanks or preforms for points), and an enormous number of decortication and thinning flakes all point to tool manufacture.

The few diagnostic artifacts from this stratum indicate a Woodland occupation. The diagnostic potsherds include cord-marked pieces (both grit- and crushed limestone-tempered) and two smooth-surfaced crushed limestone-tempered rimsherds. The one diagnostic point is small, triangular, and corner notched with a convex base. All of these artifacts are probably Woodland. One potsherd is problematical. It is fairly thin, cord marked, and sand tempered.

While Woodland sherds can have sand temper, this sherd's description more closely matches that of 2 Middle Ceramic complexes: Smoky Hill and the Bluff Creek Complex (on Bluff Creek in Harper and Sumner Counties). Both Riley Cord-roughened and the Caldwell Complex ceramics are marked by cord roughening and sand temper. Sherds that fall into this category were also found at nearby 14C0556, all from the upper 20 cm. of the deposit. The sherd from 14C0557 does differ by having a quite dark paste, while those at 14C0556 are lighter in color and almost orangish. Until any clearly non-Woodland artifacts are found in the upper stratum at 14C0557, however, it seems safe to assume it probably represents a Woodland component.

Below the uppermost layer the stratigraphy becomes a bit more complex. At 50 cm. below ground surface in A and C, the soil changed to a lighter clayey brown. In square B at 50 cm. the soil became mottled and was packed with limestone cobbles. Underneath this, and separated by a clear disconformity at 70 cm. depth was a clayey tan limestone-free soil. This soil resembled the soil which began in squares A and C at 50 cm. and was probably a continuation of it. The layer of limestone cobbles in square B--many of which were fire red--probably represents a hearth-cleaning trash midden. The point fragment (part of a large corner-notch point) and potsherd (cord-roughened and crushed limestone-tempered) found in this level are both Woodland, so it apparently belongs to the same stage at the upper soil horizon.

Feature 6 in square B is probably also Woodland and probably is related to the limestone layer above it. Although the outlines of the feature were not clearly defined until 90 cm. below ground surface, a zone of dark soil continues from the limestone down to the feature and also contains a scatter of limestone. This feature--some type of pit--was either a storage pit later filled with limestone rubble and trash from above, or it was a deep basin hearth. The Ellis-like point found in it is diagnostic of Woodland.

Feature 3 in squares A and C was probably a storage pit. It became visible at 50 cm. in the contrasting light tan soil, but probably began within the uppermost dark humus layer. The corner-notched arrow points and the smoothed grit-tempered sherd are Woodland.

The layer of tan soil that appeared at 70 cm. in square B and at 50 cm. in squares A and C may also contain a Woodland component. Feature 4--a hearth--produced a thick smooth-surfaced potsherd. This feature may have been associated with a concentration of flakes and burned limestone at 65 cm., but the intrusion of feature 3 has obscured any possible connection. The medium-sized straight expanding-base stemmed point found at 81 cm. (just outside feature 4) is probably Woodland. Until more excavation work can be done at this site, the lowermost horizon of 14C0557 appears to be Woodland.

Site 14C0557 seems to consist of a series of Plains Woodland occupations through which some progression from larger to smaller projectile points seems to have taken place. Almost all ceramics are typically Woodland. While three major soil horizons can be identified, the cultural remains could represent an even larger number of occupations.

The occupations at 14C0557 seem to have been fairly substantial. Projectile points, bifaces, scrapers, awls, drills, ceramics, manos, and metates indicate a wide range of food gathering and preparation activities, as do the shell and bone fragments. The site's location would be ideal for a winter camp, although it might have been occupied year round to exploit the ready water source.

Condition:

The site is in excellent condition. It has never been plowed and is presently covered by grass, brush, and trees. Although some erosion has taken place along the edge of the terrace, the site is probably largely intact. Little, if any, collection has been made of surface materials, and the site may be unknown to local collectors.

Project Impact:

The site lies above the project maximum flood pool of Kaw Lake, but it may receive damage along the steep eroding terrace face during high water levels.

Recommendation:

Because of the unusually great importance of this site, its very rare undisturbed condition, the rich concentration of cultural and ecological evidence, and its excellent potential for clarifying our almost non-existent knowledge of Woodland cultures in south central Kansas, this site should be tested by an east-west trench running from the terrace edge toward the bluff and talus slope. Such a trench excavated carefully and thoroughly would fully identify the value in the remainder of the site, which should then be preserved for a full scale scientific investigation. All these factors satisfy eligibility criteria for inclusion on the National Register of Historic Places.

14C0558

Description:

A small number of flakes were found in test plugs on a low rise above the floodplain of Grouse Creek. The exact extent of the site

is not known, because of dense ground cover of trees and low bushes.

Surface Collection:

None.

Testing:

A series of small shovel tests identified this site. Materials collected include utilized flakes, chipping debitage, and one small chunk of smoothed sandstone.

Interpretation:

No diagnostic artifacts were found, so no cultural affiliation can be determined.

Condition:

The site has not been plowed and is presently in trees and brush.

Project Impact:

The maximum flood pool of Kaw Lake will be about 5-10 feet lower than the western portion of the site, so the site should not be damaged unless floodwaters erode the edge of the bench.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. A minimal 2 x 2 meter test square would be helpful to assess this site's significance, but may not be mandated by adverse impact from the project. Present sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0559

Description:

A lithic scatter eroded out of a bench, on the east bank of Grouse Creek. Material was found all along this bench, across an entire field including Sites 14C0560, 14C0561, and 14C0562. These sites were thus separated according to topography only (14C0560 is separated from 14C0559 by an old meander scar). No materials were found on the high ground away from the creek. The site covers an area of about 120 x 50 meters.

Surface Collection:

Materials were collected in 4 arbitrary units (A, B, C, and D). Unit A produced a piece of smoothed limestone, a weathered chert cobble with rough cortex, 2 bifaces, and a biface fragment that could be a preform for a contracting-stem point. Unit B produced a crude biface/exhausted core (of Flint Hills Light Grey or Neva Chert), a biface section, a possible mano fragment, and possible metate fragment. A "moonstone" fragment was found in unit C. Unit D yielded a biface fragment, a large modified flake (used as a scraper), and a wide, somewhat leaf-shaped, biface. A large number of flakes--many with cortex--were found in all pick-up units, as well as utilized flakes.

Interpretation:

No diagnostic artifacts were collected, so no definite cultural affiliation can be given. The larger flakes, the spent core, and the possible point preform suggest tool manufacture and lithic reduction, while the possible mano and metate fragments suggest food processing in a camp. Corner-notched points (possibly Woodland) were found at 14C0561, which lies less than 100 meters to the northwest on the same bench. If Sites 14C0559, 14C0560, 14C0561, 14C0562, and 14C0563 are all related as their common geographic situations suggest, they may represent a single large Woodland occupation.

Condition:

The site has been plowed and partially disturbed by a meander scar.

Project Impact:

The southern portion of the site lies just above the anticipated maximum flood pool elevation of Kaw Lake, and it could be eroded during periods of flooding.

Recommendation:

This site should be periodically recollected to increase its surface collection, enhance our knowledge of it, and monitor possible erosional damage from flood stage waters of Kaw Lake. Because of its prospective role as part of a larger Woodland settlement within a large meander loop of Grouse Creek and its apparent information potential, Site 14C0559 would merit inclusion on the Register of Historic Kansas Places.

14C0560

Description:

The site lies in a plowed field on an old bench remnant, separated from Sites 14C0559 and 14C0561 by a shallow old meander in which darker soil is exposed. It consists of a scatter of lithic debris on the bench covering an area of approximately 80 x 40 meters.

Surface Collection:

Materials were collected in two pick-up units (A and B). Three bifaces were found in unit A, while unit B produced 2 crude biface fragments and 5 large chert chunks or nodules. Utilized flakes and chipping debris were found in both units.

Interpretation:

Judging from the abundance of decortication flakes and chert nodules on this site, lithic reduction probably occurred there. The site probably also served as a camp. No diagnostic artifacts were found, so no cultural affiliation can be given. Since the old meander scars probably developed more recently than Sites 14C0559, 14C0560, and 14C0561, they could have once formed one continuous settlement that possibly included Sites 14C0562 and 14C0563 also. Woodland-like corner-notched points were found at 14C0561, so it and 14C0560 could represent Woodland occupations.

Condition:

The site has been disturbed by erosion in the meander scar and by plowing.

Project Impact:

At maximum flood pool level, waters from Kaw Lake would cover much of the site, subjecting it to erosion from wave action and shoreline currents.

Recommendation:

This site should be periodically recollected to increase its surface collection, enhance our knowledge of it, and monitor possible erosional damage from flood stage waters of Kaw Lake. Because of its prospective role as part of a larger Woodland settlement within a large meander loop of Grouse Creek and its apparent information potential, Site 14C0560 would merit inclusion on the Register of Historic Kansas Places.

14C0561

Description:

The site consists of lithics, points, pottery, and limestone found eroding out of a low bench on the east side of Grouse Creek. The densest concentration was found in pick-up units "North Top" and "Top Central." The site covers an area of 170 x 60 meters. The field has been plowed and the north half of the site has been terraced. Its division from Sites 14C0559, 14C0560, and 14C0563 is topographical.

Surface Collection:

Collection was made in 5 arbitrary units: "South," "Top Central," "Downslope Central," "North Top," and "North." Collected artifacts include biface fragments: a corner-notched point, the midsection of a point (possibly a Snyder style), the expanding convex base of a point, a possible Snyder point, a small stemmed point (probably Scallorn), and two small corner-notched convex base points (probably Woodland); a discoidal scraper; mano fragments; a knife midsection, a knife tip; a fragment of smoothed sandstone; modified flakes, utilized flakes; and one potsherd. The sherd is probably of Woodland origin. Numerous flakes were found.

Interpretation:

The presence of Woodland projectile points and pottery in this site point to a Woodland occupation, probably Middle Woodland. The large number of flakes and bifaces probably result from lithic reduction and the preparation of preforms or blanks for tools. Since pottery and manos were found, this site was probably used as at least a temporary camp. Site 14C0561 is possibly related to a number of sites in the lower Grouse Creek valley--many exposed by erosion in meander scars or on benches at the same stratigraphic level (14C0320, 14C0505, 14C0516, 14C0517, 14C0519, 14C0526, 14C0527, 14C0528, 14C0529, 14C0559, 14C0560, 14C0562, 14C0563, 14C0565, 14C0566, and 14C0567. Where culturally identifiable artifacts occurred on these sites, all had a Woodland affiliation, and usually a Middle Woodland one. Some of these sites, however, have not produced Middle Woodland artifacts yet, and so this association is only suggested.

Condition:

The site has been disturbed by plowing, and its northern half by terracing.

Project Impact:

This site lies just above the maximum flood pool level of Kaw Lake, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. Because of its pivotal role in the apparent larger settlement of Middle Woodland peoples who once occupied this entire loop of Grouse Creek, it should also be periodically rechecked to monitor its condition. The importance of 14C0561 in this settlement, its relatively large size, its relative richness of cultural materials, and its good condition all meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0562

Description:

The site lies in a plowed field on the edge of a bench to the south of Grouse Creek. It is a scatter of lithic debris eroding out of the bench and washing downslope. This site is separated from 14C0561 by a relative sparseness in flake distribution, although flakes were found all along the benchline. The site covers an area of approximately 160 x 70 meters. The upslope portion of the site has been terraced.

Surface Collection:

The surface collection was made in three arbitrary units: A, B, and C (from west to east). The artifacts consist of a crude discoidal biface, 10 biface fragments, a plano-convex end scraper, a fragment of a large end scraper, the blade of a corner-notched point (with most of the stem and barbs missing), a chert core, and a knife tip. A large number of flakes were also recovered.

Interpretation:

This site is probably representative of a larger Woodland occupation of lower Grouse Creek. It lies on the same bench as 14C0561, which produced diagnostic Woodland points. The one diagnostic artifact from 14C0562--the blade of a wide, thin point with barbs and an expanding (?) stem--is probably Woodland. The large amount of debitage, as well as the numerous bifaces (as at 14C0561), point to lithic reduction on the site.

Condition:

The site has been disturbed by plowing and by terracing.

Project Impact:

This site lies just at the level of Kaw Lake's maximum flood pool, where it will be subject to damage from wave action at periods of high water.

Recommendation:

This site should be periodically recollected to increase its surface collection, enhance our knowledge of it, and monitor possible erosional damage from flood stage waters of Kaw Lake. Because of its prospective role as part of a larger Woodland settlement within a large meander loop of Grouse Creek and its apparent information potential, Site 14C0562 would merit inclusion on the Register of Historic Kansas Places.

14C0563

Description:

The site consists of a lithic scatter on a low mound below a bench, on the east side of Grouse Creek. There are many river pebbles, large chunks of chert, and snail shells. The tenant, Ross Sherwood, says that land was brought in to help stabilize the creek bank. The site covers an area of approximately 70 x 30 meters.

Surface Collection:

Collection was made in one pick-up unit. A corner-notched expanding stem point (minus part of the base and its tip) was found. It appears to represent a Woodland style. Also collected were three biface fragments, a point or knife tip, the blade of either a preform or a point, and a large crude end scraper. Chipping debitage was found as well as several large chunks of chert, some of which may have been redeposited with the landfill. A few snail shells and a mussel shell fragment were also found.

Interpretation:

The Woodland style point suggests an occupation of this site during that stage. However, it is impossible to tell whether the material collected here was originally in situ, washed down from 14C0561 (a Woodland site), was brought in with the landfill, or is a mixture of materials from two or more of these possible sources.

The chert chunks and river cobbles were likely redeposited as fill, while the Woodland point and other artifacts originated either at this site, or washed down from 14C0561. If these artifacts did originate here, they form a part of a larger Woodland settlement along lower Grouse Creek, represented by sites such as 14C0561, 14C0562, 14C0559, and 14C0560.

Condition:

The site has been disturbed by plowing and probably adulterated by the addition of landfill.

Project Impact:

This site lies at or above the level of Kaw Lake's maximum flood pool where it should not be adversely affected by the lake.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. It should also be periodically recollected to assess the future understanding of this site. The strong possibility this site lacks genuine integrity makes it ineligible for inclusion on the National Register of Historic Places.

14C0564

Description:

The site is a wide surface scatter of lithic debris and some burned limestone. It lies in a low level area in a plowed field just south and east of Grouse Creek. The site covers an area of about 80 x 30 meters.

Surface Collection:

Materials were collected in two arbitrary pick-up units. The western section produced biface fragments, a shaft abrader section, several cores, and bone slivers. The eastern section produced 2 beveled knife sections, biface fragments, a possible mano fragment, and shell and bone fragments.

Interpretation:

This site cannot be given any definite cultural affiliation since no diagnostic artifacts were found. However, the artifacts suggest a Plains village cultural assemblage, rather than the typical

Woodland materials found on nearby sites such as 14C0561, 14C0562, and 14C0563.

Condition:

The site lies above the level of Kaw Lake's maximum flood pool, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake, and it should be periodically recollected as a potential cultural anomaly within an otherwise completely Woodland settlement. Our present knowledge is too sparse to meet eligibility criteria for inclusion on the National Register of Historic Places, but recollection could alter that assessment.

14C0565

Description:

The site lies on three low rises (fingers of a bench on the east bank of Grouse Creek). It covers an area of about 40 x 20 meters, and is visible as a scatter of lithics eroding out of the bench. The field was in alfalfa at the time of survey.

Surface Collection:

The surface collection was made in three pick-up units, one for each rise. Lithic debitage and utilized flakes were found throughout the site. A large chunk of limestone was found at the edge of the bench, 50 meters to the east. It resembles a core, having one flat disc-shaped face, and flakes removed from the other faces. However, it also has finer retouching along the edges of the smooth face.

Interpretation:

Many of the flakes collected at this site had cortex on them. This and the lack of finished tools make it likely that this is a lithic reduction center. The bluff, 50 meters to the northeast, is a primary source for Wreford and Florence Cherts. No cultural affiliation can be given because no diagnostic artifacts were found, although this site is near several probable Middle Woodland sites (14C0526, 14C0566, 14C0561, 14C0562) and could be related to them.

Condition:

Plowing has partially disturbed the site.

Project Impact:

This site lies above the level of Kaw Lake's maximum flood pool, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected against damage by users of Kaw Lake. Our present sparse knowledge and cultural materials fail to meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0566

Description:

The site lies on a bench in a plowed field. Grouse Creek runs just to the north, and a meander scar has cut through the bench just to the west exposing a darker soil. The site's dimensions are approximately 90 meters from northwest to southeast by 40 meters from northeast to southwest.

Surface Collection:

The surface collection was made in three pick-up units based on flake densities--A, B, and C. Fire-reddened limestone was found in units A and C. Unit A produced a side scraper, discoidal flake, and biface fragments. Unit B produced a large end scraper, the hafting end of a large end scraper, and three potsherds. The sherds are in poor condition and cannot be classified. Unit C produced several Cowley Plain sherds and fragments of burned earth. A large piece of chipped limestone was also found here. Chert waste flakes occurred in all three units.

Interpretation:

The presence of Cowley Plain sherds suggests that this site belongs to the Great Bend Aspect. The flakes indicate lithic reduction, while the presence of pottery, tools, fire-reddened limestone, and burned earth makes it likely that this was also a camp. The site may have extended under the road that runs just to the east, possibly connecting with 14C0526. This site lies in the midst of a group of Woodland sites (14C0320, 14C0560, 14C0561, 14C0562, and

14C0526), and on the same bench as most of them. Accordingly, it could possibly contain a Woodland component as well, although no Woodland artifacts were found on it.

Condition:

The site has been disturbed by plowing, and the eastern portion may have been destroyed when the road there was built. It is also possible that 14C0566 once extended to the west, encompassing 14C0567 (a meander scar having since separated them).

Project Impact:

The site lies above the maximum flood pool level of Kaw Lake, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. Its position as a small Great Bend camp or procurement site in the midst of an older and larger Woodland settlement warrants inclusion on the Register of Historic Kansas Places. To date, only one possible outlying exploitive campsite has been investigated at Larned (Monger 1970) while most efforts have been devoted to the larger villages. Consequently, Site 14C0566 could help us to better understand the kinds of activities the Great Bend occupants of the Lower Walnut village would travel one or more days away from home to carry out.

14C0567

Description:

The site lies in a plowed field in a low rise about 100 meters south of Grouse Creek. It is separated from 14C0566 by a recent meander scar that exposes a darker layer of soil beneath the surface. The site may extend past the fence on its west side, but this area could not be surveyed. Lithic material is eroding out of the rise and washing downslope in an area of about 50 x 30 meters.

Surface Collection:

The surface collection consists of chert flakes, utilized flakes, a large chunk of chert with cortex, and a piece of worn limestone. Materials were collected in one pick-up unit.

Interpretation:

No diagnostic artifacts were found so it is impossible to assign any cultural affiliation. The site is near enough to 14C0566 (a Great Bend Aspect site) to be an extension of it, only separated from it by a recent meander scar. The lithic debris suggests that at least some secondary lithic reduction went on here.

Condition:

It has been disturbed by plowing and damaged by the meander scar.

Project Impact:

The site lies above the maximum flood pool level of Kaw Lake, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. Our present very sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0568

Description:

The site lies in a fallow field, that appears to have been cultivated at one time, at the base of a bluff and just east of Grouse Creek. Flakes were discovered in the backdirt from a recently dug barbecue pit. Extent of the site could not be determined because the ground surface was obscured by a dense vegetation.

Surface Collection:

None was made.

Interpretation:

No cultural affiliation can be assigned in the absence of diagnostic artifacts.

Condition:

The site has probably been disturbed by plowing.

Project Impact:

The site lies above the maximum flood pool level of Kaw Lake, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. Our present very sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0569

Description:

The site lies on the second terrace above the south bank of the Arkansas River, upslope into a terraced plowed field, and in and around the lawn and buildings of a summer camp. Scattered flakes were found in those areas of highest surface visibility: in a plowed field northwest of the camp, in and around trees, in driveways, and in cutbanks. The site appears to cover an area of 40 x 50 meters, but its exact boundaries could not be determined. The camp may cover part of this site.

Surface Collection:

Materials were collected in one pick-up unit, and consist of small chert flakes and one large utilized flake.

Interpretation:

Since no diagnostic artifacts were recovered, no cultural affiliation can be assigned this site.

Condition:

The site has been extensively disturbed by terracing, plowing, and the construction of camp buildings, although undisturbed portions may lie obscured beneath tree and grass cover.

Project Impact:

The site lies above the maximum flood pool level of Kaw Lake, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. Our present very sparse knowledge and cultural

materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0570

Description:

The site lies on the edge of the first terrace above the south bank of the Arkansas River in a cultivated field. Flakes and a few chunks of limestone were found eroding out of the terrace mostly towards the northwest and on top of a small rise. It covers an approximate area of 40 x 50 meters.

Surface Collection:

All material was first flagged, then collected in one pick-up unit. Chipping debitage, several utilized flakes, and a large chunk of chert from which flakes had been removed on one side--probably a core--were found.

Interpretation:

This site probably represents either a chipping station or a temporary camp. No diagnostic artifacts were collected so this site cannot be given a definite cultural affiliation.

Condition:

The site has been disturbed by plowing.

Project Impact:

The site lies above the maximum flood pool level of Kaw Lake, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. Our present very sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0571

(ADJACENT TO FEDERAL LAND)

Description:

Site 14C0571 lies on a terrace above the confluence of Otter Creek and Grouse Creek, and it covers an area of 80 x 120 meters. There is a bluff line to the north. Two cabins and a road occupy the southern tip of the site. The site is covered by grass and trees, making surface visibility poor. There is a rockshelter in a low bluff below the site on Otter Creek in which no cultural material was visible.

Surface Collection:

Since this site was not on U.S.A.C.E.-administered land, no test corings could be taken. Accordingly, materials could not be detected in the grassy areas, and collection was confined to areas where the ground surface was visible. Three pick-up units were defined, each in an area of good surface visibility: the central unit (around a cabin), the northeast, and the southern unit. All three units yielded chert flakes that were especially abundant in the road at the southern tip of the site. Flakes were also found among tree roots on the eastern edge of the site, and in a road running through a grassy field on the northern edge. The central unit produced a biface fragment, an end scraper, and what appears to be an unfinished, rejected point--possibly intended to be side notched. A blank or biface and a modified flake were found in the northeast unit. To the south were found a biface tip, the midsection of a small biface or point, a side scraper, a biface fragment, and a fragment of smoothed sandstone.

Interpretation:

Unfortunately, no pottery or other diagnostic artifacts were recovered from this site, so no cultural affiliation may be assigned to it. The flakes, unfinished point, and rough bifaces suggest that this was a chipping station, although it could also have been a camp. The rockshelter below had no overt signs of occupation although it could contain subsurface remains.

Condition:

The site is at present covered by trees and grass, but it could not be determined whether it had ever been plowed. Some disturbance occurred when two cabins were constructed in the southern part of the site. Otherwise, it may be largely intact.

Project Impact:

The site lies above the maximum flood pool level of Kaw Lake, and should not be adversely affected by it.

Significance:

This site should be preserved and protected from damage by users of Kaw Lake. Our present very sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0572

Description:

The site sits on top of a low rise on the first bench above the floodplain of the Walnut River on its west side. It is separated from 14C0501 by a meander scar to the north and west, and by a dirt road. The site covers an area of 50 x 70 meters.

Surface Collection:

The surface collection was made in one pick-up unit and consists of chert flakes, utilized flakes, and a Fresno point made of a pink heat-treated chert.

Interpretation:

The Fresno-like point found at this site is not diagnostic by itself, but the nearness of Site 14C0501 (an obvious Great Bend Aspect occupation) makes it possible that 14C0572 is also a Great Bend site. The sparseness of the surface collection prevents any determination of the site's function aside from evidence of secondary lithic reduction, but it is possible 14C0572 was an activity area of 14C0501.

Condition:

The site was planted in alfalfa at the time of survey. It has been disturbed by plowing, and possibly slightly eroded by the meander scar in its northern and western margins.

Project Impact:

The site lies above the maximum flood pool level of Kaw Lake, and should not be adversely affected by it.

Recommendation:

This site should be preserved and protected from damage by users of Kaw Lake. Our present very sparse knowledge and cultural materials do not meet eligibility criteria for inclusion on the National Register of Historic Places.

14C0573

Description:

The site lies on a low bench in a fallow field (in grass), beside an unnamed tributary to the Arkansas River. It covers an approximate area of 40 x 30 meters. Flakes were found around tree roots, eroding out of the cut bank along the tributary, and in back-dirt from gopher burrows approximately 20 meters to the northwest in an open field. The western boundary of the site could not be determined.

Surface Collection:

Materials were collected in one pick-up unit. No artifacts other than unmodified chert flakes were found.

Interpretation:

Since no diagnostic artifacts were collected, this site cannot be given a cultural affiliation.

Condition:

The site has been plowed. Some erosion of the site may have occurred along the channel of the tributary.

Project Impact:

The site will lie just above the expected maximum flood pool level of Kaw Lake, and could be further eroded along the cut bank during period of high water.

Recommendation:

This site should be periodically recollected to increase its surface collection, enhance our knowledge of it, and monitor possible erosional damage. Our present very sparse knowledge and cultural materials fail to meet eligibility criteria for inclusion on the National Register of Historic Places.

VI. DISCUSSION AND RECOMMENDATIONS

Despite the relatively large number of sites recorded and the high potential for encountering a wide variety of cultural complexes, the 73 identified archaeological sites overwhelmingly represent only two broadly defined cultural units--Woodland/Plains Woodland and Great Bend. One Archaic site (14C0541) was recorded just outside the project boundary. Another 35 sites yielded insufficient materials for assessing a cultural affiliation.

The nine Great Bend occupational components were recognized from pottery and distinctive lithic artifacts. Three other sites produced lithic tools such as small end scrapers and beveled knives characteristic of the tool kit employed by sedentary farming populations such as the Great Bend or Bluff Creek groups. However, they lacked specimens such as points or pottery fragments that could positively relate them to one or the other.

Lithic assemblages characteristic of a Woodland stage occupation on the Plains were recognized at 27 sites. There were no mounds, grit-tempered pottery, ground stone celts, or small lamellar flake knives that mark the widespread Woodland pattern in eastern North America. Nevertheless, projectile point styles resembled in a broad sense those found in both Kansas and Oklahoma in cultural contexts labelled both Middle and Late Woodland.

From a distributional point of view, the 73 recorded sites fall into three main groupings. One centers along the lower Walnut River near Arkansas City; another clusters in the valley of Grouse Creek just above its confluence with the Arkansas River; the third stretches along the bluff line and slopes on the south and southwest side of the Arkansas River.

Lower Walnut River Sites

Virtually all of these sites belong to the huge cluster (settlement) of Great Bend peoples first outlined by Wedel (1959). Specific sites include Larcom-Haggard (14C01), Elliott (14C02), Country Club (14C03), 14C0501, 14C0544, and 14C0572 (Fig. 15). The first three have been described in Wedel's work, the last three are described in this report. The sites occupy both sides of the Walnut River including the steep bluffs on the east, and broad floodplain terraces on the west.

Even though archaeologists choose to assign separate numbers to these sites, they very likely all belonged at one time to a single large settlement. In fact, this may have been the Quiviran village visited by Oñate in 1602 when he described hundreds of grass-covered lodges (Wedel 1959). Perhaps the separate concentrations that we identify as separate sites reflect social groupings within the larger Great Bend society.

What may have attracted the Great Bend peoples to erect such a large village at this spot can only be conjectured. Certainly, the broad floodplain formed by the juncture of the two rivers provided an extensive quantity of land that could be tilled with bone and wood tools. The riverine forest would also provide wooden poles for house construction and firewood. Turtles and shellfish would be readily obtainable as food from the rivers, and the waste shells found their way into pottery vessels as temper. Bison probably roamed the grasslands surrounding this locale offering a ready source of meat, hides, and bones for even small scale hunting parties. Sources of good flakeable chert could be obtained only a few kilometers to the east in outcrops of the Wreford and Florence Formations of the Flint Hills. Of all these factors, perhaps the one that sets the lower Walnut River setting apart from most others is the relatively wide expanse of cultivable floodplain.

Intriguingly, positive remains of an earlier vintage than Great Bend have yet to be discovered in the lower Walnut River locality. It is possible they have simply been overshadowed by the plentiful Great Bend remains, and they would appear during a thorough survey. It is equally possible the extensive Great Bend occupation may simply have obscured or destroyed the evidence of earlier occupations. On the other hand, this locality may not have been occupied by prehistoric peoples until the Great Bend village settled here. The limitations on the Kaw Lake survey prevents the formulation of an adequate answer to this question.

The Kaw Lake survey did provide data on the extent of the lower Walnut settlement, however. Those six Great Bend components identified elsewhere in the project area all represented small, possibly temporary, camps. Perhaps these small camps marked expeditions sent to exploit nearby resources such as the chert outcroppings of the Flint Hills. In any event, large Great Bend village sites are readily recognizable even under adverse ground visibility conditions, and the total absence of such sites along the Arkansas River downstream from the Walnut River's mouth, delimits at least the southern extent of the lower Walnut River settlement.

Lower Grouse Creek Sites

An unusually dense cluster of 42 recorded sites line both sides of Grouse Creek for about six and one-half kilometers above its mouth. These sites occupy floodplain terraces, high benches at the base of valley bluffs, and the bluff edges on both sides. Undoubtedly, many more sites may be found in this locality when lands are surveyed beyond the Kaw Lake project boundaries.

Three small Great Bend camps (14C0521, 14C0524, and 14C0566) occur within a one-kilometer stretch along Grouse Creek's west side. One of these (14C0524) spills down a rocky slope that may once have produced chert nodules. These sites possibly represent temporary camps for exploitive expeditions from the large lower Walnut settlement.

A group of five sites (14C0550, 14C0551, 14C0552, 14C0553, and 14C0554) occupy the high eastern bluff overlooking the junction of Grouse Creek and the Arkansas River. While this natural grassland has never been plowed, and no diagnostic artifacts were found, several distinctive vegetation anomalies are still visible. Local residents recount stories of an ethnohistoric "Indian camp" at this location from which one can see Arkansas City to the west and Deer Creek to the south. Whatever their ultimate cultural affiliation, this group stands apart from the rest.

Four additional sites occupy the high bench at the base of this bluff on the east side of Grouse Creek. Two of them (14C0556 and 14C0557) may be the most important sites recorded on this survey. They flank a strong spring emerging from the bluff's base and each contain from one to two meters of stratified and undisturbed cultural deposits. Several Woodland components are definitely represented and there is a remote prospect an Archaic component underlies the Woodland ones at Site 14C0557. Sites 14C0555 and 14C0558 lie south and north, respectively, of the stratified pair, but very unfavorable visibility prevented determinations of cultural affiliations. Their common situations suggest they may be related to the stratified Woodland sites.

Of the remaining 30 known sites in the lower Grouse Creek group, 15 have recognizable and apparent Woodland components--14C0320, 14C0516, 14C0517, 14C0519, 14C0522, 14C0525, 14C0526, 14C0529, 14C0530, 14C0532, 14C0559, 14C0560, 14C0561, 14C0562, and 14C0563. Four of these (14C0516, 14C0517, 14C0526, and 14C0561) yielded recognizably Middle Woodland point styles (Fig. 13), while one (14C0532) more closely matched Late Woodland features. Consequently, there would appear to have been at least two successive Woodland occupations in the lower Grouse Creek valley that could correlate with the stratified deposits at Sites 14C0556 and 14C0557. For future reference, we will refer to these as the Silverdale sites.

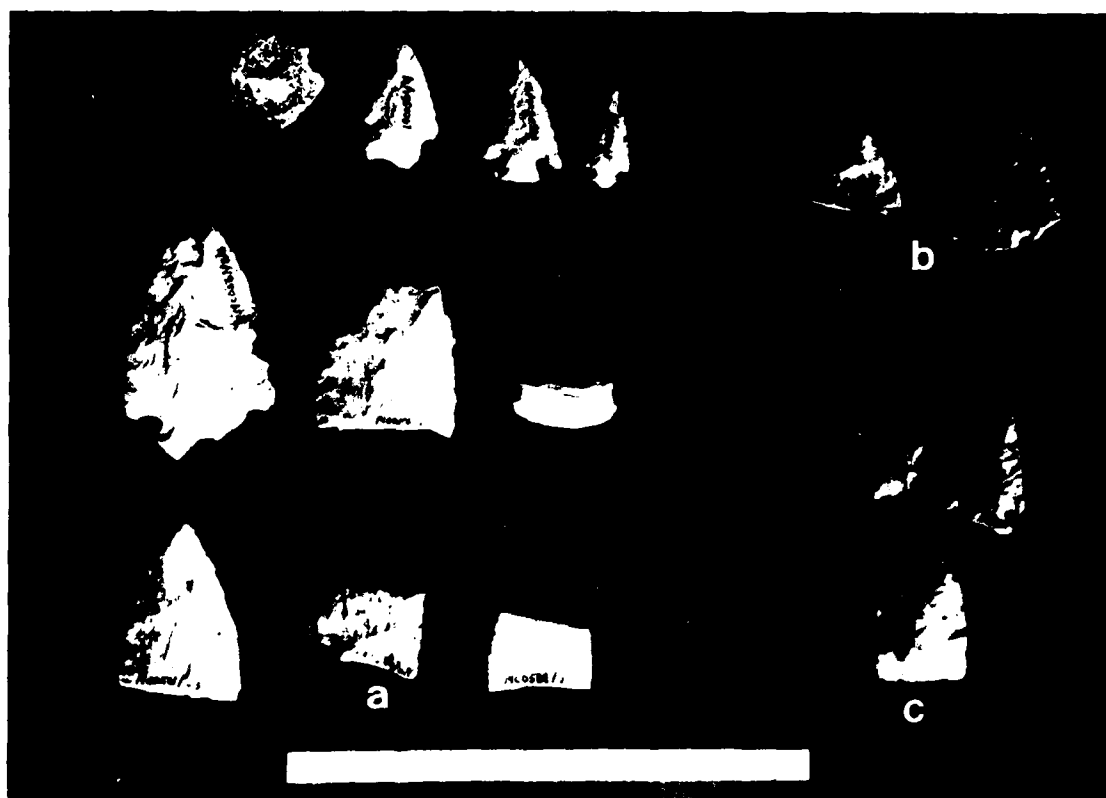


FIGURE 13. WOODLAND ARTIFACTS FROM SITES 14C0561 (A)
14C0562 (B), AND 14C0563 (C) IN LOWER
GROUSE CREEK VALLEY.

Fourteen sites of unknown cultural affiliation--14C0505, 14C0518, 14C0520, 14C0523, 14C0527, 14C0528, 14C0531, 14C0533, 14C0534, 14C0535, 14C0565, 14C0567, 14C0568, and 14C0571--more closely match the adjacent Woodland site assemblages than any others. While it is unsafe to call them Woodland, the bulk probably do form a part of what may have been sizeable settlements of both Middle Woodland and Late Woodland peoples.

One final site (14C0564) produced an assemblage quite different from those found on the numerous nearby Woodland sites. Its collection more easily fits in the lithic industry found on sites of sedentary village dwelling farmers, such as the Great Bend people. This could be a Great Bend site or one of an earlier people, but we lacked any diagnostic artifacts to tell.

Obviously the major occupations in the lower Grouse Creek valley were by peoples practicing a culture adapted to the gallery forests lining the major watercourses in the Plains. Unfortunately, we know next to nothing about their more specific adaptations either from earlier excavations or from this survey. It seems quite apparent though, that the Woodland peoples in this locality were actively exploiting the Wreford and Florence chert outcrops in the bluffs along Grouse Creek.

How widespread the Silverdale Woodland communities were, cannot be answered from this survey. Lands adjacent to Kaw Lake's project area would need to be examined both upstream along Grouse Creek, and on the bluffs to the east and west. We are inclined to believe the currently recorded sites represent the bulk of both a Middle Woodland settlement and a Late Woodland settlement.

Arkansas River South Bluff Sites

In contrast with other portions of Kansas, a series of sites occur along the southern bluffs of the Arkansas River for slightly more than four kilometers above its confluence with Grouse Creek. We recorded 18 sites on the bluff edge and on toe slopes below the bluff. Other sites probably occur along this same bluff line to the west for perhaps another five kilometers to Sites 14C0302 and 14C0303, but this ground lies outside the Kaw Lake project boundary and was not surveyed.

At least three occupational stages appear to be represented by this group of sites--Archaic, Late Woodland, and Great Bend. Site 14C0541 situated on the bluff edge is the only site recorded in the Kaw Lake, Kansas Section, survey that produced Archaic style artifacts. Perhaps this bluff situation foretells where other Archaic sites might be found in this general vicinity.

Six sites with Late Woodland cultural affiliations and one Woodland site indicate a quite clear cut occupation (Fig. 14). In fact, a cluster of sites toward the southeast end of this south bluff series may indicate a distinct Late Woodland settlement. Woodland Site 14C0537 and Late Woodland Sites 14C0538, 14C0512, and 14C0513 extend for one kilometer along the bluff edge with Late Woodland Sites 14C0539 and 14C0515, and unknown Site 14C0514 situated on the toe slopes just beneath them. Unknown Sites 14C0536 and 14C0540 along the bluff edge could also belong to this settlement whose maximum dimension would not exceed one and one-half kilometers. Site 14C0547, the only other definite Late Woodland site identified along the south bluffs, lies one full kilometer northwest of 14C0540.

One Great Bend campsite (14C0546) occurs within the south bluff group. Like those in the lower Grouse Creek valley, it seems to represent an outlying exploitive camp rather than a major village site.

All other sites in this group have unknown cultural affiliations--14C0542, 14C0548, 14C0549, 14C0569, and 14C0570. One other (14C0543) contains evidence for a historic Euroamerican occupation overlying an unknown prehistoric component. This group extends for two kilometers along the bluff edge encompassing one Late Woodland site (14C0547) and one Great Bend site (14C0546). It would be hazardous to even speculate at this time what these sites might represent.

The bluff edge site situation has been recorded relatively rarely so far in Kansas. One recognized pattern finds a regular proportion of Great Bend sites on bluff edges, but other patterns are virtually non-existent. Undoubtedly the great emphasis on surveying stream valleys prior to reservoir construction has severely limited the available sample of known sites in Kansas. Still several attempts to locate sites on bluff edges have also proved fruitless. Consequently, the series of sites along the south bluffs of the Arkansas River in Kaw Lake's Kansas Section appear to mark a significant divergence from the usual pattern encountered in Kansas. The occurrence of Archaic and Late Woodland sites in particular produce thought-provoking questions about prehistoric people's choice of site situation.

Other Sites

Ten other sites were recorded in the survey of the project area. Two (14C0302 and 14C0303) were identified along the south bluffs of the Arkansas River due south of the lower Walnut River site group. Both had apparent Woodland components and Site 14C0303 also had a small Great Bend camp. There may be sites along the five kilometers of bluff line between these two and the previously discussed cluster, but this ground was not surveyed.

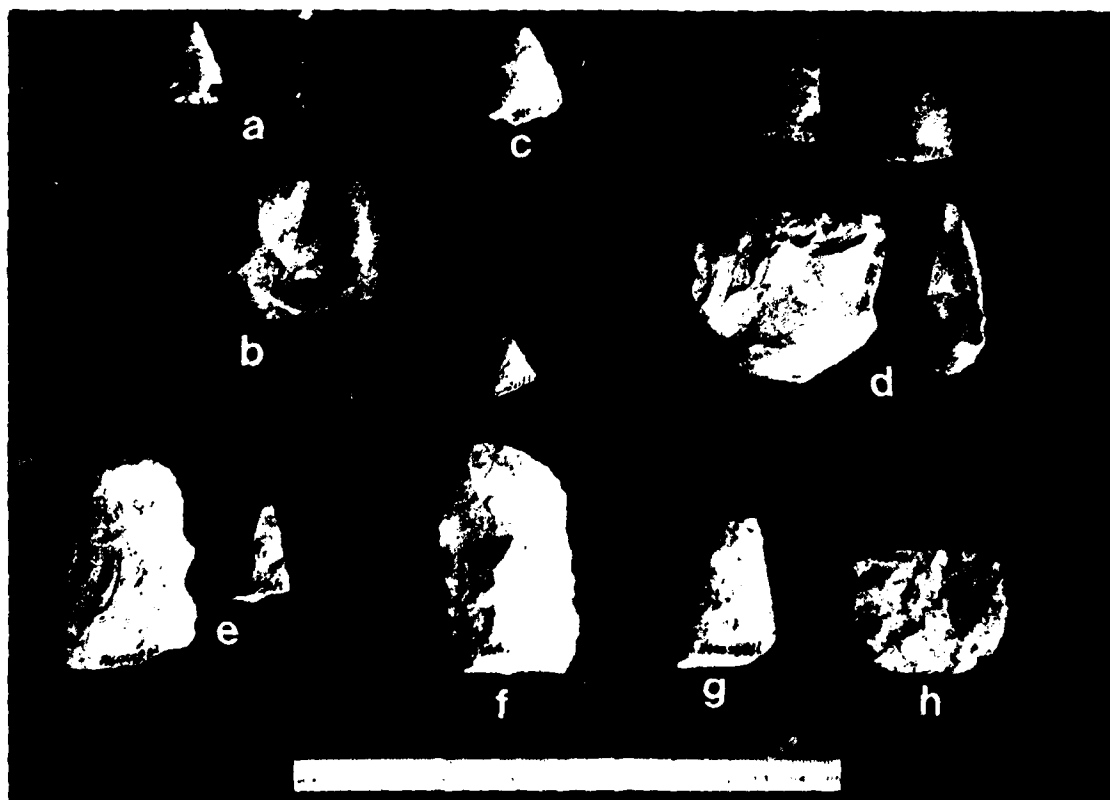


FIGURE 14. LATE WOODLAND ARTIFACTS FROM SITES
14C0513 (A), 14C0515 (B), 14C0539 (C),
14C0547 (D), 14C0542 (E), 14C0549 (F),
14C0538 (G), AND 14C0540 (H) ALONG
THE ARKANSAS RIVER SOUTH BLUFFS.

Another small Great Bend camp atop a seemingly Woodland component occurs at Site 14C0545 almost exactly across from the mouth of the Walnut River. The remaining seven sites lie scattered along the north side of the Arkansas River along floodplain terraces, and on toe slopes beneath a heavily dissected bluff. Five have unknown cultural affiliations--14C0506, 14C0507, 14C0508, 14C0511, and 14C0573. Sites 14C0509 and 14C0510 yielded lithic assemblages similar to those from sites of sedentary village-dwelling farmers, although they could not be positively identified as any one group in particular.

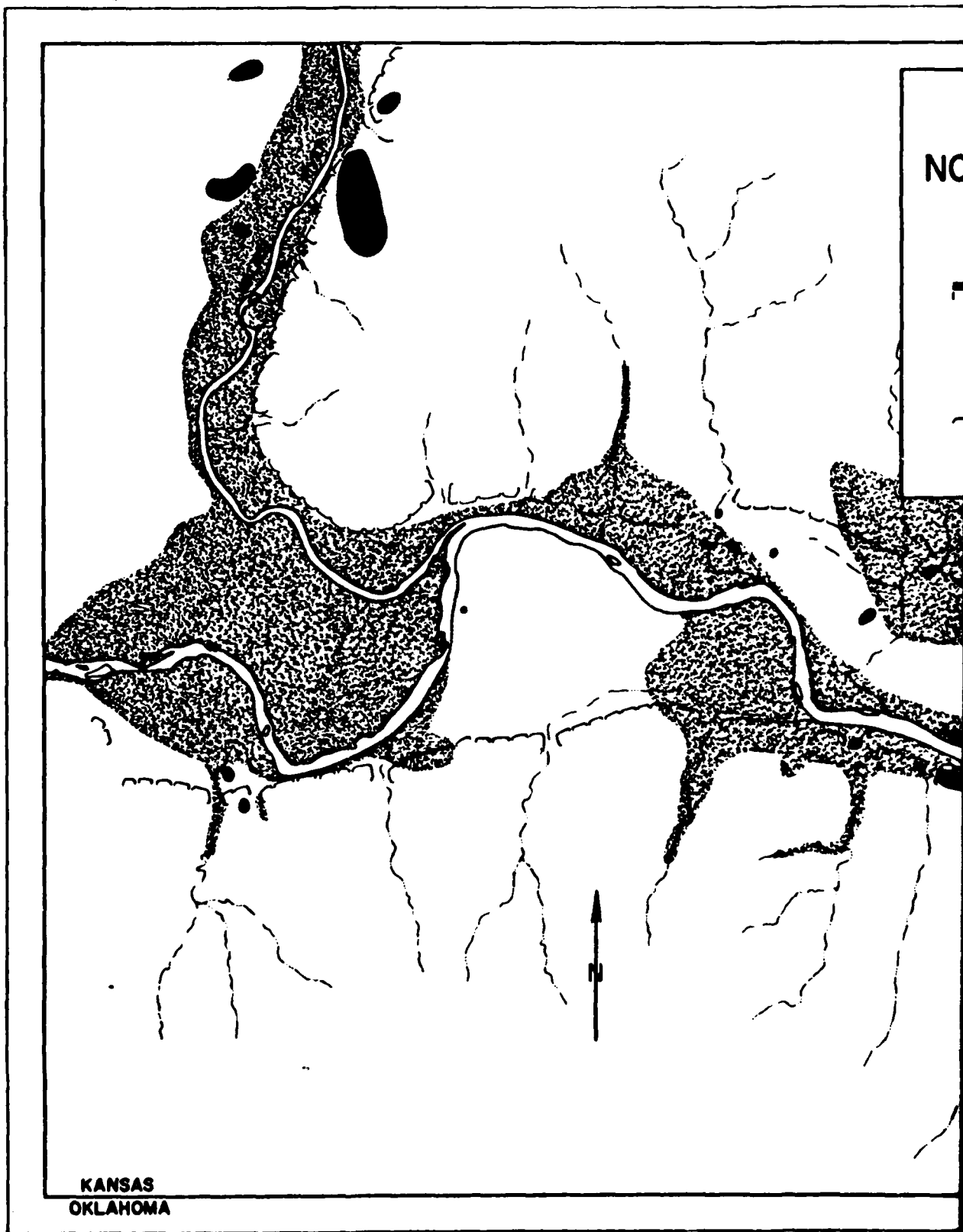
Recorded Culture History

Some use of the project area by Archaic peoples seems to be indicated by the one Archaic site (14C0541) situated on the southern bluff edge overlooking the broad Arkansas River valley to the northeast. Because the survey had to be restricted to federally administered lands situated mostly in the valley, the full range of Archaic sites here probably have not yet been found. The occurrence of a Calf Creek point on this site suggests a Middle Archaic occupation, perhaps around 3000 B.C. Several local private collections contain other Calf Creek points reportedly found in the project's vicinity. Consequently, more widespread evidence for this occupation can be expected from future work.

To date, no remains of later Archaic or early Woodland cultural groups have been observed. The first intensive occupation and use of the project area seems to be represented by a large settlement of Middle Woodland peoples in the lower Grouse Creek valley. Corner-notched and contracting-stem large projectile points, such as Gary and Langtry, highlight lithic assemblages of large bifaces, large round steep scrapers, and irregular grinding stones. The lithic collections do appear to be somewhat similar to what is usually found on Cuesta Phase sites in southeastern Kansas, but the distinctive ceramics and large ovoid house plans (Marshall 1972) have yet to be encountered. In a similar vein, our data are inadequate for postulating a possible link to the Cooper Complex of north central Oklahoma. Whatever cultural affiliation may ultimately be recognized, a relatively large scale Middle Woodland population centered in the lower Grouse Creek valley.

Late Woodland sites with small corner-notched points of the generalized Scallorn style and a generalized Woodland lithic assemblage clustered in two localities. One lay along the east side of lower Grouse Creek, possibly overlapping the preceding Middle Woodland settlement there. The second settlement occupied the Arkansas River south bluffs due west of the lowest end of Grouse Creek. Many other undifferentiated Woodland sites may belong to one of these three settlements.

FIG. 5



**KAW LAKE
EASTERN SECTION (KANSAS)
ARCHAEOLOGICAL SITES
CONSTRUCTED ENVIRONMENT**

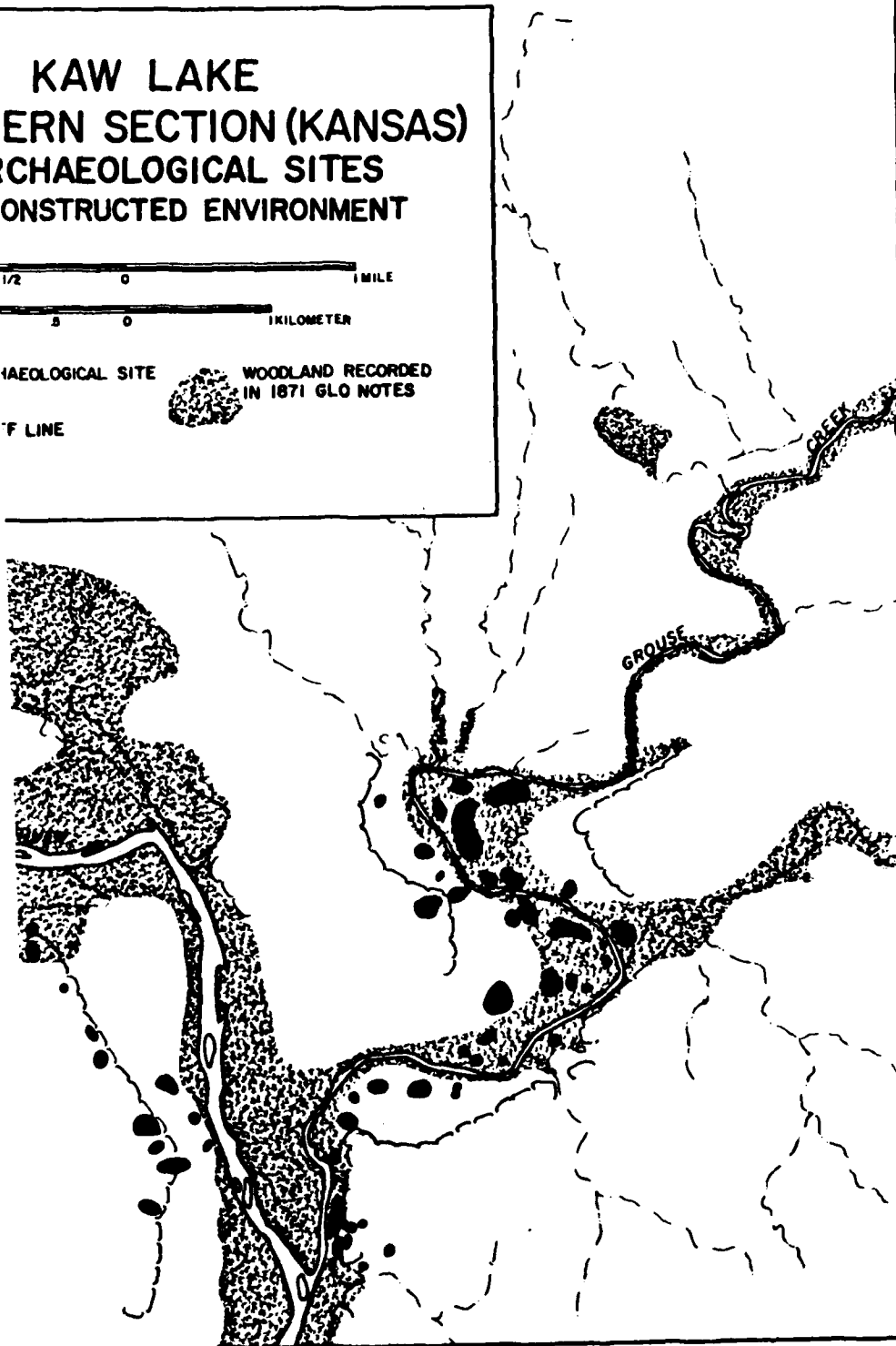
1/2 0 1 MILE

1/2 0 1 KILOMETER

ARCHAEOLOGICAL SITE

WOODLAND RECORDED
IN 1871 GLO NOTES

1/2 LINE



None of the site assemblages that indicated a sedentary village farming cultural pattern contained any materials diagnostic of any cultural complexes other than Great Bend. Consequently, we can only assume an extensive occupation by Great Bend people. The major settlement stood in the lower Walnut River valley, but small outlying camps may be found throughout the project area (Fig. 15). The Great Bend people resided in the project area at the time Spanish explorers began crisscrossing the Plains in search of natural resources.

There is no solid evidence for an ethnohistoric Indian occupation following the Great Bend. One group of small sites on the bluff edge east of the mouth of Grouse Creek could conceivably mark such an occupation. The historic Euroamerican peoples colonized this area during the 19th century, but generally settled on the higher ground beyond the limits of this survey.

Assessment of Significance

On an individual basis, seven of the 53 sites on U.S.A.C.E. administered lands appear to meet eligibility criteria for inclusion on the National Register of Historic Places (Table 2). Nine others would seem to qualify for inclusion on the Register of Historic Kansas Places. Five sites on adjacent non-federally owned lands would also qualify for one or the other of these two registers. Many of the other sites could eventually qualify for inclusion on these registers as more knowledge of them is acquired. However, the real significance of many of these sites depends on their role in larger settlements.

The Register of Historic Kansas Places provides protection for a statewide inventory of cultural resources in the same manner as the National Register of Historic Places provides for resources of national significance. The Kansas Register was established along guidelines established by the National Register office under the National Historic Preservation Act of 1966 and subsequent modifications. It deals primarily with those resources not suitable for inclusion on the National Register, but possessing historic significance of a statewide or regional nature. It is administered by the Kansas State Historic Preservation Office in Topeka.

The Great Bend settlement on the lower Walnut River is one of four presently known large settlements recorded within the distribution of Great Bend culture--including Little River in Rice County, Paint Creek in McPherson County, and Marlon. Even though some excavations have been conducted in several of these sites, no comprehensive attempt has yet been made to fully delineate this settlement in terms of size, its component parts, and its adaptive situation within the lower Walnut River environment.

None of these Great Bend sites appear to be directly threatened by any planned development of Kaw Lake. Unfortunately, the nearness of Arkansas City with its spreading residential and industrial needs does threaten the preservation of these sites, all of which are owned privately. They clearly possess a strong potential for producing information of immense value to a fuller understanding of Great Bend culture and its probable heritage for the Deer Creek and Bryson-Paddock Wichita Indian villages.

The Woodland settlements along lower Grouse Creek and on the south bluffs of the Arkansas River pose quite different problems. Because so little is understood about the various Woodland occupations of the central Kansas-Oklahoma region, any such clusters of sites take on great significance. It might even be more accurate to consider the lower Grouse Creek sites for National Register eligibility as a district encompassing at least a Middle Woodland settlement, and possibly a Late Woodland one also. Such consideration would necessarily include several sites of currently unknown cultural affiliation because of their potential for belonging to one of these two settlements.

Woodland/Plains Woodland stage settlements have been reasonably delineated only at Elk City and Big Hill Reservoirs in Kansas (Marshall 1972; Rowilson 1977 and 1980; Brogan 1980b). Hence, this kind of information could help to understand the community organization of Woodland stage peoples in addition to providing a fuller picture of their lifestyle pattern.

On an individual site basis, only two sites (14C0505 and 14C0526) presently appear to meet eligibility criteria for inclusion on the National Register of Historic Places, and one (14C0320) would qualify for the Kansas Register. The sites that would logically constitute a district based on a lower Grouse Creek (Silverdale) Middle Woodland settlement would include those three plus 14C0516, 14C0517, 14C0518, 14C0519, 14C0525, 14C0527, 14C0528, 14C0529, and 14C0567. Several of these sites face possible damage from the edges of Kaw Lake's maximum flood pool. They are all presently under cultivation, and each fresh plowing probably disturbs progressively larger portions of the cultural remains.

The Late Woodland site cluster on the Arkansas River south bluffs does not represent the size, distinctiveness, or data potential of the lower Grouse Creek sites. Only its situation on a bluff edge seems unusual. Two of these sites (only 14C0512 is on U.S.A.C.E. land) would apparently qualify for inclusion on the Register of Historic Kansas Places, and none of them are seriously endangered by Kaw Lake.

The most significant sites within the Kansas Section of Kaw Lake are Sites 14C0556 and 14C0557. Their demonstrated stratified

deposits of several Woodland components, the presence of subsurface features, excellent preservation of bone and other ecological evidence, and their undisturbed nature make them nearly unique in south central Kansas. Natural erosion along their western edge could be aggravated by Kaw Lake's maximum flood pool. Site 14C0557, with the possibility of an Archaic component underlying the several Woodland ones, would appear to be the most significant site of the 73 covered by this survey.

Recommendations

The individual descriptions for each site list recommendations for future actions within a larger management plan. These individual site recommendations, however, fall into several patterns. Of the 55 sites that will not be adversely affected by Kaw Lake, 50 can simply be preserved with no additional action. To be sure, future agricultural activity will continue to eat into their cultural deposits, but none of them appear to be in imminent danger from already planned developments. All 20 of the sites outside or adjacent to the Kaw Lake boundaries fall into this group.

We would recommend that planning for all future developments associated with Kaw Lake's Kansas Section take into account the locations of these sites, even though many of them have not yet met eligibility criteria for listing on a historic register. Furthermore, it is obvious many more as yet unsurveyed sites surround the federal lands. Consequently, provisions should also be made during planning to survey any lands to be newly acquired and lands to be affected by access. A reasonable preservation/mitigation program could then be proposed for each development.

Three of these non-endangered sites (14C0561, 14C0563, and 14C0564) have yielded sufficient materials to pose significant questions that could be answered perhaps by minimal further investigations. Since all three are currently under cultivation, two or three revisits under different conditions and following reworking of the ground should produce enough new materials to solve these problems. Site 14C0561 is a Middle Woodland site with National Register potential. Recollection of surface materials could recover additional artifacts and pottery to help assess possible relationships with Cuesta Phase or Cooper Complex, or to warrant postulation of yet a new cultural complex. Site 14C0563 of probable generalized Woodland affiliation could produce enough information from subsequent surface collections to meet eligibility criteria for inclusion on the National Register. Site 14C0564 appears to represent a sedentary farming village, and has the best prospect for containing remains of a complex other than Great Bend (perhaps Bluff Creek or Uncas).

Should this materialize from future surface collection, the site would probably also meet National Register eligibility criteria.

Two other non-endangered sites of unknown cultural affiliation may be important enough to test in order to recover diagnostic materials that would assist in the overall assessment of Kaw Lake sites. Site 14C0558 occupies a situation similar to Site 14C0557. It has never been plowed and was discovered by shovel testing. Only a test excavation will reveal whether this site also contains stratified cultural layers that would qualify it for National Register listing. Site 14C0505 has consistently produced a rich surface collection, but heavy local collector activities have prevented recovery of diagnostic materials. The site occupies the focal situation within what appears to be a large Middle Woodland settlement in lower Grouse Creek valley, and it appears to meet eligibility criteria for inclusion on the National Register of Historic Places. It seems only a test can produce suitably diagnostic artifacts.

Fifteen sites lie above the level of the expected conservation pool of Kaw Lake, but face inundation or wave action from seasonal maximum flood pool levels. Three others would be subject to intensive erosion by small runoff channels leading to the flood pool. We have recommended that twelve of these sites (14C0320, 14C0515, 14C0526, 14C0529, 14C0533, 14C0534, 14C0535, 14C0539, 14C0559, 14C0560, 14C0562, and 14C0573) be revisited two to four times each, following fresh working of the ground, and under differing seasonal conditions. Such revisits would increase the surface collections and provide additional data for interpreting the cultural affiliations and the nature of these sites. They would also allow some monitoring of changing conditions, perhaps damage, caused by the periodic flooding. Periodic revisits covering several years would be both more informative and less costly than testing for these sites.

We have also recommended that six of these possibly endangered sites be tested--14C0516, 14C0517, 14C0519, 14C0532, 14C0556, and 14C0557. Sites 14C0556 and 14C0557 are National Register quality sites that have already been tested. However, these tests were small and unable to adequately examine the full range of evidence available in them. More extensive test excavations employing near total data recovery techniques such as screening, flotation, water screening, and midden analysis should be conducted to analyze their full potential.

The other four sites (14C0516, 14C0517, 14C0519, and 14C0532) have all been subjected to regular visits by local collectors. Consequently, periodic revisits for the recovery of diagnostic artifacts will not be likely to succeed. Minimal tests--one or two 2 x 2 meter squares--could produce such artifacts, but they should also offer some information about the depth of the existing deposit and how seriously the future erosion might damage that deposit.

None of the Kaw Lake sites identified by this survey appear to face destruction or perpetual inundation by Kaw Lake. Consequently, no mitigation seems to be necessary. We do suggest test excavations be dug into eight sites for various reasons, and that fifteen others be periodically revisited. All 23 of these sites lie on Kaw Lake property. Care should be taken to preserve the remaining 30 sites on U.S.A.C.E. lands, plus the 20 additional known sites on adjacent properties. Such preservation would require no specific actions at this time, but would entail planning for their mitigation or other disposition should they be threatened by future developments.

TABLE 2. SUMMARY OF NORTHERN KAW SITE RECOMMENDATIONS

<u>Site No.</u>	<u>Cultural Affiliation</u>	<u>Significance</u>	<u>Impact</u>	<u>Recommendation</u>
*14C0302	Woodland (?)		None	Preserve
*14C0303	Woodland (?) Great Bend camp		None	Preserve
14C0320	Woodland (??)	Ks. Register	Flood pool	Recollect
*14C0501	Great Bend village	Nat'l. Register	None	Preserve
14C0505	unknown	Nat'l. Register	None	Preserve Possible test.
*14C0506	unknown		None	Preserve
14C0507	unknown		None	Preserve
14C0508	unknown		None	Preserve
14C0509	sed.Plains farmer		None	Preserve
14C0510	sed.Plains farmer		None	Preserve
14C0511	unknown		None	Preserve
14C0512	Late Woodland (?)	Ks. Register	None	Preserve
14C0513	Late Woodland	Ks. Register	None	Preserve
14C0514	unknown		None	Preserve
14C0515	Late Woodland		Flood pool	Recollect
14C0516	Middle Woodland (?)		Flood pool	Test
14C0517	Middle Woodland (?)		Flood pool	Test
14C0518	unknown		None	Preserve
14C0519	Woodland (?)		Flood pool	Test
*14C0520	unknown		None	Preserve
14C0521	Great Bend	Nat'l. Register	None	Preserve
*14C0522	Woodland		None	Preserve
14C0523	unknown		None	Preserve

*Just outside or adjacent to U.S.C.E. lands.

TABLE 2. continued

<u>Site No.</u>	<u>Cultural Affiliation</u>	<u>Significance</u>	<u>Impact</u>	<u>Recommendation</u>
*14C0524	Great Bend (?)	Ks. Register	None	Preserve
14C0525	Woodland (??)		None	Preserve
14C0526	Middle Woodland	Nat'l. Register	poss. erosion	Recollect
14C0527	unknown		None	Preserve
14C0528	unknown		None	Preserve
14C0529	Woodland (?)		Flood pool?	Recollect
14C0530	Woodland (?)	Nat'l. Register	None	Preserve
14C0531	unknown		None	Preserve
14C0532	Late Woodland	Ks. Register	Flood pool	Test
14C0533	unknown		Flood pool	Recollect
14C0534	unknown		Flood pool	Recollect
14C0535	unknown		Flood pool	Recollect
*14C0536	unknown		None	Preserve
*14C0537	Woodland		None	Preserve
*14C0538	Late Woodland (?)		None	Preserve
14C0539	Late Woodland		Flood pool	Recollect
14C0540	unknown		None	Preserve
*14C0541	Archaic	Nat'l. Register	None	Preserve
14C0542	unknown		None	Preserve
14C0543	Historic (?) Prehistoric		None	Preserve
*14C0544	Great Bend	Ks. Register	None	Preserve
14C0545	Woodland (?) Great Bend	Ks. Register	None	Preserve
*14C0546	Great Bend	Ks. Register	None	Preserve

*Just outside or adjacent to U.S.C.E. lands.

TABLE 2. continued

<u>Site No.</u>	<u>Cultural Affiliation</u>	<u>Significance</u>	<u>Impact</u>	<u>Recommendation</u>
14C0547	Late Woodland (?)		None	Preserve
14C0548	unknown		None	Preserve
*14C0549	unknown		None	Preserve
*14C0550	unknown		None	Preserve
*14C0551	unknown		None	Preserve
*14C0552	unknown		None	Preserve
*14C0553	unknown		None	Preserve
*14C0554	unknown		None	Preserve
14C0555	unknown		None	Preserve
14C0556	multi-Woodland	Nat'l. Register	Erosion (?)	Test
14C0557	multi-Woodland	Nat'l. Register	Erosion	Test
14C0558	unknown		None	Preserve (Test)
14C0559	Woodland (?)	Ks. Register	Flood pool	Recollect
14C0560	Woodland (?)	Ks. Register	Flood pool	Recollect
14C0561	Middle Woodland	Nat'l. Register	None	Recollect
14C0562	Woodland	Ks. Register	Flood pool	Recollect
14C0563	Woodland (?)		None	Recollect
14C0564	Plains village		None	Recollect
14C0565	unknown		None	Preserve
14C0566	Great Bend	Ks. Register	None	Preserve
14C0567	unknown		None	Preserve
14C0568	unknown		None	Preserve
14C0569	unknown		None	Preserve

*Just outside or adjacent to U.S.C.E. lands.

TABLE 2. continued

<u>Site No.</u>	<u>Cultural Affiliation</u>	<u>Significance</u>	<u>Impact</u>	<u>Recommendation</u>
14C0570	unknown		None	Preserve
*14C0571	unknown		None	Preserve
14C0572	Great Bend (?)		None	Preserve
14C0573	unknown		Flood pool	Recollect

*Just outside or adjacent to U.S.C.E. lands.

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APPENDIX A

CONTRACT #DACW56-79-C-0021

SCOPE OF WORK

1. General - The contractor shall conduct a reconnaissance study to locate, describe, and evaluate all observable historical and archeological resources on Corps land at Kaw Lake, Northern Section. (The Northern Section is defined as that portion of Kaw Lake project lying within the State of Kansas; approximately 3,700 acres). The contractor shall conduct the necessary investigations in these areas to bring the Corps of Engineers into full compliance with Executive Order 11593, which requires that cultural resources on all federally owned land must be inventoried and individual sites, district, or multiple resource listings which appear to qualify must be nominated to the National Register of Historic Places. Previous Corps archeological surveys and excavations were restricted to that portion of Kaw Lake which is located in Oklahoma.

2. Scope of Services - The work to be performed shall consist of the following:

a. A literature and records search of all pertinent publications, manuscripts, ethnographic data and archeological - historical site reports relating to the study area, which, when combined with the survey data, shall provide the basis for a written report.

b. An updated evaluation of significance for any previously identified sites in the study area.

c. Complete on-foot coverage of 100% of the study area to determine site locations. When a site is found, it will be recorded on Kansas State Archeological Survey forms and plotted on appropriate USGS Quadangle Maps and suitable aerial photographs. After consultation with the Corps, the contractor decides that certain portions of the study area can be exempted from on-foot coverage, he shall explicitly define the areas so treated and justify the non-coverage.

d. Minimal testing shall be conducted at the discretion of the contractor in order to determine the depth and areal extent of the cultural deposits. All test pits or test holes must be backfilled. All sites shall be photographed and mapped. All artifacts collected during the course of the field investigation shall be washed, catalogued, and analyzed.

e. A report, the specifications for which are listed under paragraph 9.

f. The completion of National Register forms for individual sites, districts, or multiple resource listings which appear to meet the eligibility criteria.

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